ROTUNDA

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The Last Three Seasons at Fengate

Some Early Canadian Portraits

Animals That Look Like Plants

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ROTUNDA

the magazine of The Royal Ontario Museum

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Cover: Portrait miniature of the artist Joseph Vernet (1714–1789) signed Hall (Peter Adolf Hall, 1739–1793). It is an oval watercolour on ivory painted in the second half of the 18th century and was acquired by the European Department with the generous help of Mrs. Donald Early. (Miniature 8 cm × 6.5 cm in heavy gilt bronze frame 11 cm × 9.7 cm) (Photo: Leighton Warren)

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On a Meeting Place

WITH THIS ISSUE *Rotunda* enters upon its second decade of publication. When the first issue was published at the beginning of 1968, the then managing editor observed in an editorial: "*Rotunda* appears as the Museum faces a period of change, renewal, and expansion which it hopes will claim the interest and support of the many people who regard it with pride and affection." Today, as an important milestone in the magazine's history is passed, that observation is again (or should it be "still"?) true in every particular. The occasion is therefore doubly apt for assessing our accomplishments and charting future developments. Like much else in the Museum during the period of transformation, *Rotunda* will be looking to new horizons.

Doubtless among our readers in foreign lands or even in distant parts of Canada itself there are some who have never visited the Royal Ontario Museum. For their sake it may be useful to explain that the title *Rotunda* is taken from the domed, octagonal area that forms the Museum's main concourse. It is the place of entrance, the hub from which the visitor sets out — whether in quest of panctars, potlatch hats, or parasaurolophus — and above all a place of meeting. "Meet you in the Rotunda" are words exchanged countless times every day between visitors setting out to view different exhibits, colleagues planning to lunch together, staff members wanting a few words together as they go about their various tasks, and others with purposes on which we shall not even venture to speculate.

Meeting places have always been a matter of peculiar concern to Canadians. They could hardly have failed to be so to those who travelled the canoe routes, forest trails, and featureless plains of a vast and sparsely populated land. And now particularly, the search for meeting places, or common ground, at every level from the spiritual and intellectual to that of commercial self-interest has become all-important in the endeavour to foster unity among a population of widely varying origins, cultures, and historical experiences.

The provision of a meeting place has always been one of the primary functions of *Rotunda*. Indeed, the original magazine of the ROM, published as a supplement to *Varsity Graduate* at the time when the Museum was an integral part of the University of Toronto, was entitled simply *Meeting Place*. It was a modest, 16-page pamphlet of small format with few or no illustrations and no colour work. It is a fair assumption that it was in order to retain the connotations of the original magazine's title that its successor was called *Rotunda*.

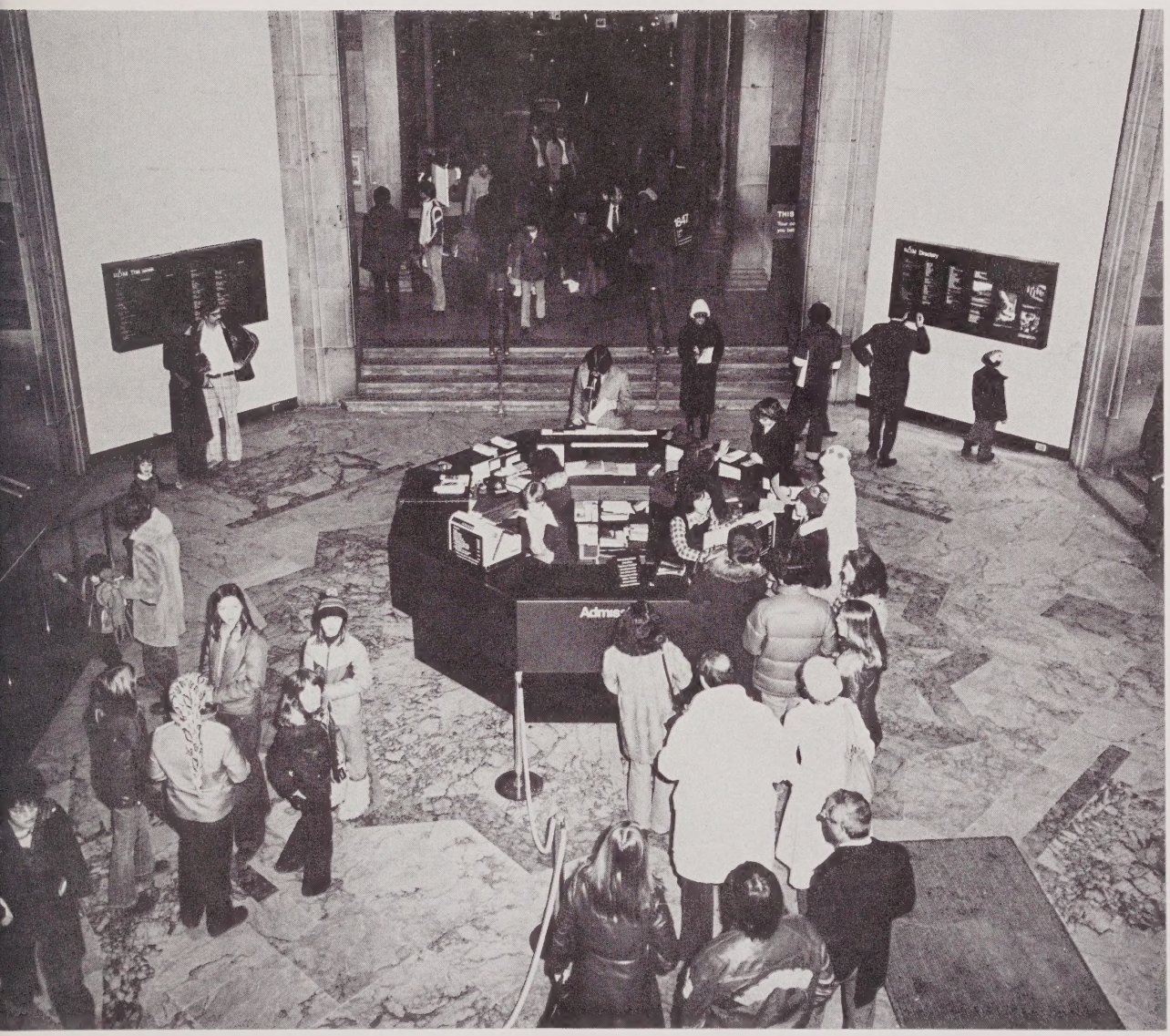
For *Rotunda* is a meeting place in many different senses. Most obviously, of course, it is a place where the Museum meets its public. In an extensive programme of scholarly publications the staff of the Museum make available to their professional colleagues throughout the world the results of their field work and research. In the pages of *Rotunda* they meet a wider public on a different level. Here they are able to write in a more relaxed and informal way about the Museum's activities, collections, research, and all the many facets of its varied life and work, and also sometimes about other Museum-related topics that claim their interest.

Thus *Rotunda* is the reflection of a Museum that is itself a meeting place of the world's many cultures spread out in space over the face of the earth, and in which are represented all the eras of history and prehistory from the Precambrian to the Space Age — truly a place where, in a rather different sense from St. Paul's, "the ends of the ages" have come together. Moreover, the ROM is an institution that is "almost unique amongst the large museums of the world in that the sciences and art and archaeology departments are still integrated and retained beneath one roof". In despite of C.P. Snow, therefore, the Royal Ontario Museum remains a place where the "two cultures", so called — the scientific and the artistic — meet and speak to each other as a daily matter of course.

In *Rotunda*, then, we have one of the many meeting places, at many levels, provided by the Royal Ontario Museum. As the magazine enters upon its second decade it remains our purpose to search for new ways to make these meetings still more fruitful and effective.

Meet you in *Rotunda*!

THE EDITORS



TROLL

Sites Within Sites

The Last Three Seasons at Fengate

Francis Pryor

OUR ORIGINAL INTENTION, when we started work at Fengate, about 80 miles north of London, back in April 1971, was to excavate for perhaps three to five years. Since then, however, we have learned that if we are to make any sense of a thinly spread settlement site we must clear and dig very large areas indeed—and this takes time. A mere acre or two cannot possibly be representative of a "site" that we know survives today over some 500 acres. Now I write "site", as I do not use the word in its generally accepted sense of a specific, often well-defined area of ancient activity, for example, a hill-fort, a burial mound, a tell, or a cemetery. Fengate consists of many small sites, which are sometimes well defined, within larger sites, which are rarely well defined, all within the total "site", which is undefined — except by modern boundaries, such as houses and factories. Recent survey work has revealed many other complex "sites" like Fengate, mainly, but not exclusively, in south-eastern Britain.

It is fair to say that before the First World War the archaeological landscape of Britain was seen as a loose network of well-defined discrete sites. However, wartime technological developments altered the picture. The aeroplane, improved cameras, and high-speed film, combined initially for purposes of military reconnaissance, gave archaeologists an invaluable new technique.

The discoveries of the pioneer aerial photographers were spectacular indeed — and one thinks here of the Stonehenge Avenue — but a rapid accumulation of photographs was hindered by shortages of money, aeroplanes, and pilots. In general, too, pioneer aerial photographers tended to pay more attention to upstanding monuments or earthworks than to sites that revealed themselves only as dark marks in growing vegetation — known as cropmark sites today.

After the Second World War, however, more aircraft and pilots became available and archaeologists were quick to take advantage of the situation. The new generation of air photographers tended to be more innovative than their predecessors and soon techniques of aerial photography had been greatly refined. Extensive photographic coverage of Britain became feasible, for not only were archaeologists taking cameras into the air, but the RAF, the Ordnance Survey, and such bodies as the Potato Marketing Board (who search for signs of blight using infra-red film from the air) were also taking photographs, many of them of archaeological importance. Over the past few years the pace has if anything intensified—to such an extent that in the summer of 1976 alone more than 2,000 photographs were taken of the countryside around Peterborough. This barrage of new information has completely transformed the way we look at the archaeological landscape of Britain. Over large tracts of the country, particularly in the low-lying, well-drained gravel soils of southern England, it is often impossible to say where one site stops and another starts. Fengate is just part of the archaeological continuum that skirts the Fenland and stretches up the Nene and neighbouring river valleys, covering hundreds of square miles.

In 1971 we decided that the only way we could make sense of the "site" would be to let it define itself, although we had no idea how it would do this. Our research objectives (*Rotunda*, Summer 1975) were of a strategic rather than a tactical nature. We could talk only in terms of archaeological

Opposite page: A new system of earthmoving involving long-reach, tracked hydraulic excavators. This machine is scraping the ground in two-inch increments.

Below: Photographic tower raised by compressed air. Some of the photographs in this article were taken from its 40-foot platform.

Above: Circular eavestrough and internal post-holes of Bronze Age round house.

Opposite page, left: Another view of the Bronze Age round house showing the short S-shaped drain that connected the house to the main field drains.

Opposite page, right: A subsidiary drove of the main Bronze Age system. This small trackway for animals appears to have been first dug about 1800 B.C. and is slightly earlier than other parts of the system.

generalities, such as changing settlement patterns, evolving systems of land management, or man-to-environment relationships—many of which sounded frankly platitudinous. An intentionally loose excavation strategy, moreover, requires (a) a very cooperative landowner (and the Peterborough Development Corporation is certainly that) and (b) enough money to clear and excavate the large areas the site might require us to dig. Happily, the ROM and the British Department of the Environment have been more than generous in this respect. In archaeology the old maxim that if a job is worth doing it is worth doing well is particularly applicable.

Readers may be familiar with my two previous *Rotunda* articles (Spring 1972 and Summer 1975), which give a more complete picture of the site's geographical and environmental contexts than we have space for here; suffice it to say that Fengate, Peterborough, is a site on the edge of the Fens at the point where the river Nene enters these marshy flatlands. It is not actually in the Fens, but sits on the flood-free land that skirts and bounds them, some 15 feet above sea level. Situated at Fengate, ancient man was able to exploit the rich natural resources of the Fens, which provided him with winter fuel, building materials, and protein (in the form of fish, eels, and wildfowl), and at the same time he could cultivate the well-drained, flood-free gravel soils of the lower Nene Valley or graze its pastures.

Aerial photographs taken in the late sixties, before the rapid expansion of Peterborough New Town, show the site covered by a tangle of cropmarks. A few were periglacial features such as frost cracks, but most were man-made and were mainly ditches, pits, and wells. Features such as foundation trenches for houses, stake-holes,

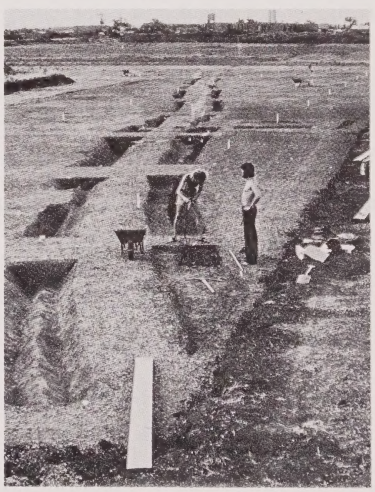
and small post-holes did not show up at all, since the soil cover was too thick; on some parts of the site a foot or so of flood clay, probably laid down in the 3rd or 4th century A.D., completely obscured everything beneath it (the large Iron Age settlement described in the summary on page 8 was entirely hidden by this deposit). It was obvious from the sheer complexity of this "palimpsest" of features that the site, or rather sites, involved had been occupied over a considerable period of time. What we had to do was bring order out of the apparent chaos.

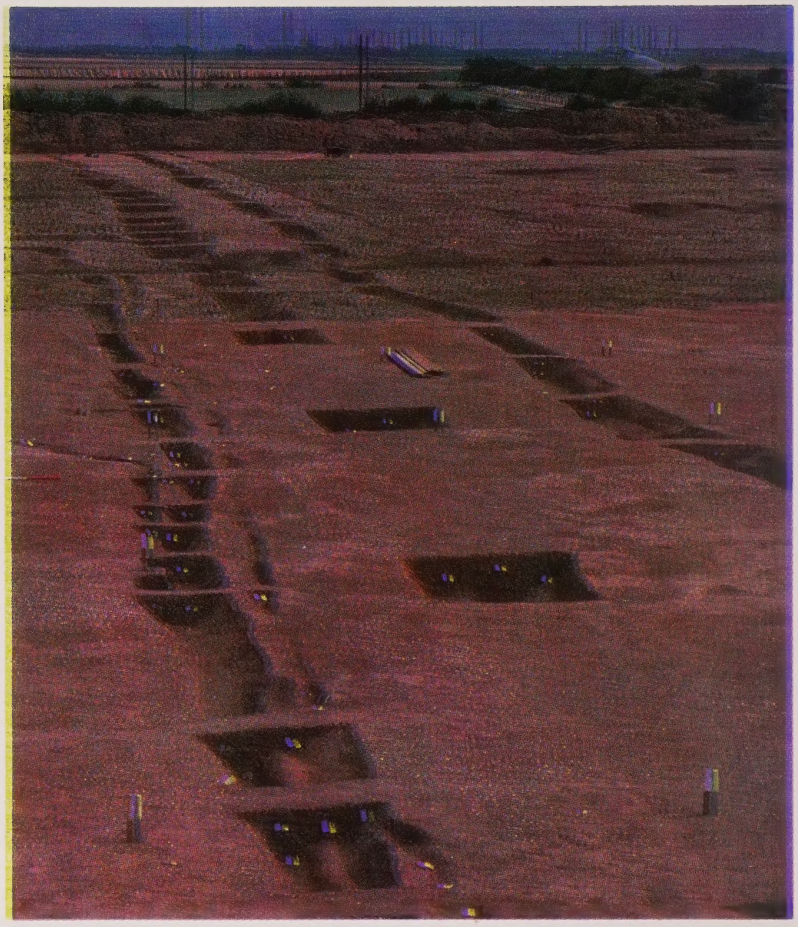
The first step was to define features that, judged by their regular layout, were probably contemporary with one another. There were two obvious ditch systems, which seemed to be internally consistent but were laid out on conflicting alignments. This disparity suggested that they were chronologically distinct. The first system consisted of a series of straight, parallel, often paired ditches, which ran at right angles to the Fens. Despite their regular arrangement these ditches were demonstrably pre-Roman, since air photographs clearly showed them to be cut through by the Fen Causeway, a dumped-gravel military road probably constructed in the early years of the Roman occupation. The second system was composed of large ditches enclosing the yards and droves of a farm, also probably of the Roman period. The only other diagnostic cropmark was a large ring-ditch, probably of the Bronze Age to judge from excavated examples found elsewhere in Britain.

As the summary on page 8 shows, we do now have a vague outline of the succession of events at Fengate itself, but we still do not know to what extent this picture has to be modified as one moves away from the immediate area. The site, as it survives today, is not contained by any ancient boundary, but simply stops beneath the houses and factories of modern Peterborough. The degree to which ancient economies would have changed along the path of the archaeological continuum of which Fengate forms a tiny part must remain unknown for the present. I intend to make the relationship of the site to the region as a whole the next stage in the Fengate project.

The past three seasons' work has been aimed at two goals. First, we have tried to trace the spatial distribution of certain types of features, using air photography, geophysical survey, and trial-trench excavation. Second, we have attempted the complete excavation of one well-defined site—using the word here in its usual sense—in the hope that it will throw light on a specific, poorly understood period.

The first objective has been largely realized. The exceptionally dry summer of 1976 was superb for cropmark photography—even permanent pasture, usually one of the most "opaque" of crops, was showing clear marks as the drought killed off the grass. The new photographs showed the Bronze Age field system to extend over a much larger area than we had previously suspected, perhaps an additional 40 to 50 acres. There was also the shadow of a hint that the Bronze



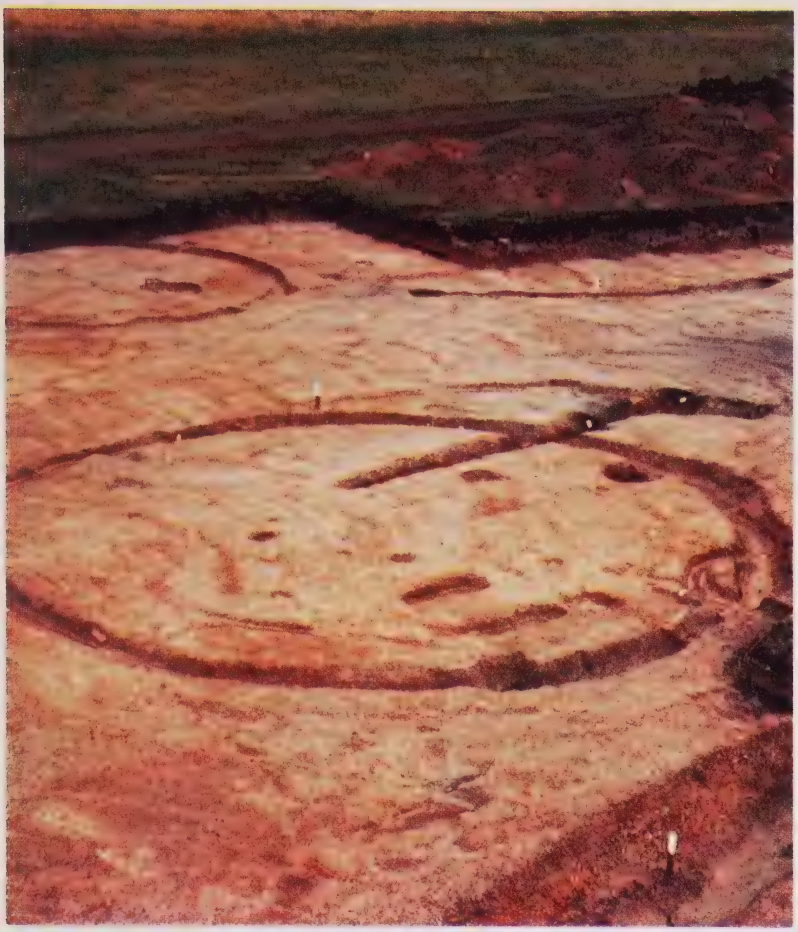


Right: General view of part of the Bronze Age field system with the flat Fenland on the horizon.

Opposite page, top: Later Iron Age circular hut foundations. These are slightly larger and more substantial than their Bronze Age predecessor.

Opposite page, bottom: Model of an Iron Age circular house, during construction. Note the wattle walls visible in the interior. They have been smeared with clay on the outside and the posts rest in scaled-down reductions of actual post-holes found during excavation.

Dates	*Period*	*Events*
(Radiocarbon)		
3500–2500 B.C.	Earlier Neolithic	Initial forest clearances. Widely separated single-family houses with gardens and livestock. Site probably occupied all year round.
2500–2200 B.C.	Later Neolithic	Fens flooded by semi-salt water. Site abandoned for 200 to 300 years (period uncertain).
2200–1900 B.C.	Late Neolithic to Early Bronze	Forests largely cleared. Scrub with open grassland. No evidence for cereal crops. Cattle herding (dairy products) dominant. Fen pastures exploited in summer. Small rectilinear field system.
1900–1000 B.C.	Early and Middle Bronze	Open grassland. Economy continued unchanged. Population expansion. Fields greatly extended.
1000–400 B.C.	Late Bronze to Middle Iron	Fields abandoned. Scrub encroachment. Poor Fen drainage. Pastoralism dropped in favour of mixed farming. Year-round occupation of site.
400 B.C.–A.D. 400	Later Iron and Roman	Economy as before. Larger, nucleated settlements. Village abandoned in 1st century A.D. Short Romano-British re-occupation in later 2nd century. Third-century freshwater floods and abandonment of site.



Age fields excavated in 1974 might extend under a modern road and, we hoped, across a large meadow up to the Fen-edge. However, the air photographs of this part of the site were not very good, possibly because of repeated flooding in the past, and so we decided to put down some trial trenches. Filled-in Bronze Age field-boundary ditches are not easy features to identify at the best of times, and the chances of finding them in small trial trenches would have been remote indeed. We therefore had to cut quite substantial trenches to increase our chances of success. In all, we dug five trenches; each one is about ten yards wide and over a hundred yards long. They confirmed that the Bronze Age fields did indeed run up to the Fens and, as we hoped, their ditch fillings were thoroughly waterlogged. Samples taken from these wet deposits should give us good environmental information.

One of the objectives of the 1976 season was to find a settlement associated with the field system. I never thought we would succeed in this, since Bronze Age occupation sites are notoriously elusive in southern England. Our luck was in, however, when we came across the foundation trenches and post-holes of a small round house, linked neatly with the field system by a short length of S-shaped gully. Behind the house were the pits and post-holes of the area where people went about their daily tasks. This settlement, which probably dates to around 1200 B.C., was also associated with bronze-working and salt manufacture.

We started on the second of our two principal objectives in 1975. The specific period involved was the Iron Age. Although this is the most recent prehistoric period, at Fengate it is also the least fully understood. The chance to investigate a site of this period came in 1975 when the soil phosphate survey of the year before (*Rotunda*, Summer 1975, p. 38) showed that the land north of the Roman farm had once been heavily occupied. We had to remove more than a yard of heavy

clay topsoil, which had completely hidden the settlement from the aerial camera, and underneath we found the remains of an Iron Age village. This was our opportunity to fill the large gap in our knowledge and we determined not to rest until we had stripped and excavated the whole thing. Three years, and about a thousand features later, we have realized that goal. The 1977 season saw the job completed.

Following the abandonment of the Bronze Age field system about 1000 B.C., the economy at Fengate seems to have changed from pastoralism, in which the site was used as a winter "home base" in a seasonal transhumance circuit, to settled mixed farming, in which the site was occupied all year round. The settlement we discovered in 1975 seems to have been first occupied sometime in the 5th or 6th century B.C. From very small beginnings it grew rapidly, and by the 3rd century it consisted of about 20 buildings and numerous drainage ditches, pits, and wells. The buildings are almost all round, fashioned in exactly the same way as their Bronze Age predecessor described above. Phosphate analysis showed that about 60 per cent of the buildings had been used at some time in their history to house animals, most probably over winter.

The eavestrough trenches empty into large pits or, more usually, into one of the village's main drains. Some of these drains had been lined with long strands of willow twigs, cut from pollarded willows growing nearby. The presence of pollarded willows — and there is no doubt about this — suggests that wickerwork would have been important to the community, and we can suppose that light, strong wicker chairs and baskets would have been extensively used and probably also traded.

The settlement does not appear to have been particularly prosperous. We found no coins and only about a dozen bronze brooches; fine pottery too is not as abundant as it might be. On the other hand, the naturally rich environment would have ensured a regular food supply, for we know that medieval Fen-edge villagers rarely went hungry, even in winter. The site is typical, I think, of the many small rural communities that we know existed in the area during the later Iron Age. And this of course is what gives it its importance. It can be used to illustrate ordinary Iron Age life for the good reason that it *is* ordinary and has been completely excavated (a condition that regrettably is far from ordinary). We know the geographical limits of the settlement and so can be fairly definite in, for example, our estimates of population. It is vital that one know one's sample size before attempting exercises of this sort.

As well as artifacts, the settlement has produced tens of thousands of bones and bone fragments, whose identifications and measurements are currently being fed through a computer in Tübingen, West Germany. Preliminary results show that we will soon know much about contemporary breeds of cattle and sheep; there is already an indication that butchering practices and techniques changed between the Bronze and the Iron Age.

Finally, (in case it be thought that we can always predict what we are going to find) the site frequently

Above: A mysterious complex of circular later Iron Age buildings, none of which produced any evidence for occupation, either by man or animals. Their function remains obscure.

Right: The edge of the later Iron Age village, showing buildings aligned north-south in a row, facing onto the Fens.

produces surprises. Perhaps the best bonus appeared in the last week of the 1975 season. We were cleaning up the sides of an Iron Age drainage ditch when we came across a large patch of pale silt. The fact that there were a few scattered minute flecks of charcoal mixed in with the silt made us suspect that it had been disturbed by man and was not a natural, geological deposit. So we dug it and found that it was the upper part of the filling of an oval grave in which lay the remains of four people: a young man, a baby, a young woman, and a child. The bones of the woman and child had been pushed to one side about six to nine months after death, to make room for the baby and young man. The most remarkable aspect of this burial was that the young man had been killed by a flint arrowhead, which was lodged between his ribs. The leaf-shaped arrowhead is of a type commonly found in the third millennium B.C. and would place the grave group in the earlier part of the Neolithic period. We had stumbled across what is arguably the earliest known homicide in Britain.

The crouched skeleton of a young man with a flint arrowhead lodged in his chest (third millennium B.C.) is lifted from the earth in a single block.

Francis Pryor, Assistant Curator in the Office of the Chief Archaeologist, was born in London, England, in 1945, and educated at Trinity College, Cambridge, where he received an M.A. in archaeology and anthropology. He has worked on many British archaeological sites since 1962, and in 1970 was Assistant Director at the North Elmham Anglo-Saxon site, a dig that the ROM helped finance. Mr. Pryor is particularly interested in the Early Iron Age in eastern England, and when not digging or writing up the Fengate site, is cataloguing the ROM's extensive prehistoric British metalwork collections. His Excavation at Fengate, Peterborough, England: The Second Report *is in publication.*

Portrait Miniatures

Amassing a Collection

Heribert Hickl-Szabo

PORTRAIT MINIATURES are by no means a new star in the collectors' firmament, for while they could be considered merely the forerunner of the portrait photograph, their often unbelievably fine quality and their sometimes historic import have long attracted the eye of the dilettante, even though he had no interest in or connection with the sitter. Institutional collecting was a different matter. Because miniature painting enjoys a position halfway between applied art and fine art, it has never been satisfactorily established whether the responsibility for collecting miniatures lies with the art gallery or with the museum. It is more than time for one of the two to undertake the study and exhibition of this remarkable product of a craft that flourished from the 16th to the 19th century.

The European Department of the ROM began to turn its attention to portrait miniatures about 1970, and its first major move was to mount a loan exhibition of the Starr Collection from Kansas City (*Rotunda*, Summer 1973). Since then we have received two long-term loans totalling almost 60 items and have acquired some 20 miniatures of importance, so that we may now note with some satisfaction that we are amassing a collection. The fact that miniatures have recently become a prime target of collectors is something of a hindrance to our progress, for while the appetite of the ROM is large its budget is small, and we are often left empty-handed.

One of the reasons that interest in collecting miniatures is growing is that more people are living in apartments and small houses, with less space for large treasures. Another is that they are resisting the outrageously high prices for silver, porcelain, and furniture, both English and French, though miniature prices too are on the rise. Five to eight years ago the acquisition of a pleasing likeness by Menusier or Augustin Ritt would have been possible for about $300 or $400 (though even then a John Smart

Opposite page: Portrait of an unknown man, probably Austrian school, early 19th century. (50 mm × 40 mm)

Below: Portrait of an unknown young woman by Peter Adolf Hall. French school, second half of 18th century. (7.4 cm × 5.8 cm)

Right: Portrait of a young woman in fashionable dress, by Leopold Diem. Austrian school, dated 1834. (80 mm × 70 mm)

Below: Portrait of the painter Joseph Vernet by Peter Adolf Hall. French school, second half of 18th century.

miniature of a beautiful woman might have brought between $2,000 and $5,000). Today a single item in the recent disposal sale of the Heckett Collection brought a top price of $110,000.

Yet the Museum has this year succeeded in acquiring six very important miniatures outright, and a seventh one on a long-term loan. Unquestionably the most outstanding is a portrait of the painter Joseph Vernet (1714–1789), signed Hall (Peter Adolf Hall, 1739–1793), which was purchased with the generous help of Mrs. Donald Early. It is an oval watercolour on ivory, set in a heavy gilt bronze frame. Although it is undated, the sitter's apparent age of about 40 places it in the second half of the 18th century.

Vernet has a vivacious look and wears a flattish dark brown cap tilted over his left ear and a dark brown smock with a blue ribbon. His left hand holds what appears to be a drawing board and his right hand, resting on the left, grasps a crayon. The right hand has obviously been damaged but acceptably well restored. The background is dark grey, very slightly lit from the sitter's left. Although the application of colour to the smock is rather sketchy, the miniature is extremely fine — with face and hands delicately finished — and very powerful. It was found on the Swedish market, where Hall's work occasionally appears, and has won the favourable verdict not only of Swedish experts but of international ones like Daphne Foskett. As the French school is rather thinly represented in the growing ROM collection, this miniature makes a strong and appropriate addition to it.

Also from Sweden came a second portrait signed Hall, of an unknown young woman with a tempting décolletage. While the miniature is not a companion piece to the Hall portrait of Vernet, its superb quality, the delicacy of the artist's approach, and the beauty of the sitter will bring it to the forefront of the Museum's collection.

On the back of the portrait there is an inscription "Miniature of Mrs. Cardew, daughter of Andrew Plimer". Normally such an inscription could be accepted without question, but more convincing evidence will have to be found to verify this one. The young woman's hair style and dress suggest a date of 1770 to 1775, but Plimer's daughter could not have reached the sitter's apparent age of 18 or so before 1810 to 1815. Despite the seemingly misleading inscription, this miniature too won the approval of Swedish and English experts, because of its fine quality.

A third miniature, an upright oval watercolour on ivory in a nar-

Sketch of a young woman. English or French school, initialled T.F., dated 1810. (50 mm × 40 mm)

Opposite page: Sketch of a young woman by Mrs. Manin, née Millington. English school, early 19th century. (10 cm × 10.7 cm)

Below: Portrait of an unknown woman by Antoine Vestier. French school, late 18th century. (50 mm × 40 mm)

row brass frame, portrays a man in three-quarter profile, with a beard from ear to ear and a serious expression enlivened by vivacious eyes. He is balding, but not old, and wears a black jacket and a black bow-tie and his white shirt front is embellished with gold buttons. The miniature is unsigned and without any attribution but is probably South German or Austrian, about 1840 to 1845. The style is not unlike that of Robert Theer or his brother Adolf, but exact identification of the artist must be postponed until we have more information. Nonetheless its quality and style warrant the miniature a place of honour in the Museum collection.

The fourth portrait, an upright rectangular miniature on ivory, is signed L. Diem and dated 1834. Leopold Diem worked in Prague from 1830 to 1840 and miniatures by his hand appear occasionally in exhibitions. This one is a half-length portrait of a young woman in a brown dress trimmed with lace, with a bow of blue ribbon at the neck. Her hair is parted in the centre and crowned by a topknot. Quite apart from its fine portrait quality, the likeness is of special interest because of its depiction of the fashion of the day.

An unfinished watercolour painted on ivory sketches the portrait of a girl about 18 years old, looking up to her left with a dreamy expression. Her wavy hair is held by a red ribbon and the square décolletage of her dress is adorned by a lacy ruffle with a pattern of roses. The portrait is initialled T. F. and dated 1810 and may well be of west European origin, perhaps from France, Switzerland, or South Germany.

Unfinished portraits or sketches were often made by an artist as a memory aid, when working with a restless model, or when more than one copy of the portrait had to be done. Usually such sketches were not signed. The fact that this one bears initials permits the speculation that either it is the work of a gifted dilettante or it was presented to the sitter with the commissioned

portrait. No matter who did the sketch, the charm of the face will greatly enhance our display of miniatures.

The sixth portrait, the gift of Mr. W. H. Graham of Greenbank, Ontario, is also a sketch, of a young woman about 20 years old. It is done in pencil and watercolour on cardboard and judging by the fashion of the sitter's dress must have been executed about 1825 to 1830. On the back of the portrait there is a penned inscription "By Mrs. Manin — artist. L. . ." (?London). The artist is listed in Schidloff's *The Miniature in Europe*, under "Manin, née Millington, 1800–64", as an important and talented pupil of Sir W. C. Ross. While the unfinished watercolour initialled T. F. may be an artist's memory aid, this portrait certainly is. Sketchy though it is, it is very expressive and must have served well as a substitute for the model during the completion of the painting — or paintings.

A seventh miniature came to the Museum this year on a long-term loan from one of the European Department's sponsors. It is a portrait on ivory of a beautiful young woman about 25 years old dressed in the fashion of 1775 to 1780 — in a grey dress with a rich lace jabot. In her hair, which is arranged in contemporary style, she wears a blue ribbon. The miniature is either English or French. It is attributed to the hand of Antoine Vestier, who was born in France in 1740 and worked in both France and England until 1824. This is a particularly valuable addition to the small group of French miniatures in our display.

And so the ROM collection of this fine and delicate expression of 16th- to 19th-century craftsmanship grows, and we hope in the future will grow even faster as more people come to understand and appreciate portrait miniatures. Considering that there is no other public collection in Toronto, and probably only one private one, the goal of a comprehensive collection seems a worthwhile one.

Mr. Heribert Hickl-Szabo was born in 1920 in Graz, Austria, into a family of art and antique dealers, and he virtually grew up in "the trade". Although he had some university training in mechanical engineering, his interest remained with fine and applied arts. Mr. Hickl-Szabo came to Canada in 1950 and joined the staff of the ROM 18 years ago. For the last ten years he has been Curator of the European Department. He also holds a cross-appointment as Associate Professor in the Department of Fine Art at the University of Toronto and is in charge of Course FA422 "The Applied Arts in Western Europe", in which he has lectured for 17 years.

Canadian Faces

Above: Portrait of the Abbé Féré-Duburon of Varennes, painted in the early 1790s by an unidentified Canadian artist. (Oil on canvas 27 1/2 inches × 23 1/2 inches)

Right: Portrait of Susannah Bouteneau of Boston, bride of Michael Francklin, painted by John Singleton Copley about 1762. Her father was a leading citizen of Boston and was connected by marriage to Peter Faneuil and also to some Loyalist families. (Oil on canvas, 30 1/4 inches × 25 1/4 inches)

Opposite page: Portrait of Michael Francklin of Halifax, painted by John Singleton Copley in Boston about 1762. Francklin made his fortune selling rum to the navy and later became lieutenant-governor of Nova Scotia. (Oil on canvas, 30 1/4 inches × 25 1/4 inches)

Some Early Portraits

Mary Allodi

THE PORTRAITS to be exhibited at the ROM's Canadiana Gallery from April 7 to September 10, 1978, were chosen to show some residents of Canada who were portrayed here rather than abroad. The exhibition is in effect a survey of painters and their clients from 1780 to 1870 and includes portraits executed in the most popular mediums of the day: cut-out and painted silhouettes, watercolours, pastels, miniatures on ivory, as well as oils on canvas. These portraits not only give us a look at some fascinating personalities from Canada's past, but they also record the evolution of the portrait trade in this country and document the costume and social circumstances of the subjects.

In the autumn of 1757 Thomas Ainslie of Halifax wrote to the famous Boston painter John Singleton Copley acknowledging receipt of his portrait, which, he said, "I am just going to send . . . to Scotland to please a fond Parent. . . ."[1] Obviously Canada had very little to offer in the way of portraitists at that period, and prominent officials either brought their portraits with them from Europe or went down to Boston to have them painted. When Halifax merchant Michael Francklin took a bride in Boston in 1762, he and his new wife were painted by Copley, as were many Haligonians. In 1764 Ainslie, now collector of customs at Quebec, wrote to Copley once more, inviting him to spend a summer in that city, where "all those of Credite in the town would be glad to employ You."[1] But Copley was too busy at home. The time was right for Canada to develop its own portrait trade.

Although a handful of portraits were painted in New France during the 17th and early 18th centuries, a native school of portrait painting did not really exist there until the 1780s, when peace, prosperity, and immigration had created a comfortably settled bourgeoisie, eager for pictures on the walls. In response to the demand, a number of local painters emerged. Some had learned to paint while restoring the

churches, others came from the sign- and house-painting trades, and a few were trained painters who had emigrated from Europe. Because Canada was cut off from the mainstream of fashionable painting, these artists developed a style of their own, one that reflected the cultural milieu in which they lived. Their simple and direct portraits are more expressive of the life and the character of the people of Lower Canada than are many more accomplished paintings. For example, the portrait of the Abbé Féré-Duburon of Varennes, painted about 1790 by a local artist, is naively linear in technique but in expression it is monumental. It is not only the study of an individual priest; it also conveys the solid simplicity of life and the importance of the church in French Canada.

Paris-trained Louis Dulongpré came to Montreal about 1787, after fighting for the American Revolution. He is said to have painted more than 3,000 portraits in oil, pastel, and miniature before his death in 1843. His 1808 portrait of James Sinclair of Three Rivers evokes an 18th-century European elegance, but it is also imbued with the forthrightness that was the mark of the New World.

Who had their portraits painted? Obviously the successful and self-assured, the pillars of society. They wore their best clothes and presented a formal face to the world. It is interesting to note that very few subjects were painted with the attributes of their trades or professions. In the exhibition, the hatter is bareheaded, the piano manufacturer has a quill pen over his ear, and the governess is accompanied by a dog. Possibly members of the merchant class were too genteel to acknowledge how they earned their place in society. Lawyers and politicians seemed prouder of their professions and were often portrayed in their robes of office.

With a few delightful exceptions, Canadian portraits seldom have any locale as background to the figure, as do many British portraits of that period. Instead of a country estate or an interior setting, we are given a solid background, occasionally relieved by a swag of drapery and a classical column. This reluctance to paint a background scene may reflect a lack of skill among the itinerant painters, but it may also reflect an unwillingness on the part of the clients to incur the added expense entailed. And so we are left with a detailed rendering of costume and jewellery and an equally frank recording of facial features. Crossed-eyes and other physical

Opposite page: Portrait of James Sinclair, described by him as "done by Louis Dulongpré, Master Limner in all Canada. Three Rivers, 2 July 1808". (Oil on canvas, 26 3/4 inches × 21 3/4 inches)

Right: Portrait of Charles Fothergill, Toronto 1834, by visiting American artist Grove Sheldon Gilbert. Fothergill was an author, publisher, naturalist, and amateur painter, and is shown here with one of his own works. (Oil on canvas, 29 7/8 inches × 24 inches)

Opposite page: The McTavish family of Montreal about 1804. (Grey wash on paper, 8 inches × 11 3/4 inches)

Right: A sure and convenient Machine for drawing Silhouettes *shows the artist tracing the outline of a shadow cast onto transparent paper. This engraving was included in the 1792 edition of John Caspar Lavater's famous* Essays on Physiognomy, *which revived public interest in the art of drawing profiles. (Photo: Thomas Fisher Rare Book Library, University of Toronto)*

Below: Advertisement that appeared in The York Gazette *(Toronto), 30 April 1808. Mr. Bouker was an itinerant American profile cutter.*

PROFILE LIKENESSES.

MR. BOUKER returns his thanks to the Ladies and Gentlemen of York for the great encouragement he has received from them, in the profeſſion in which he has practiced in New England, through New Brunſwick, Quebec, Montreal, &c. having in the tour taken ſome thouſands of likeneſſes.—Two likeneſſes will be taken of one perſon, and one framed, for one dollar.

His ſtay at his room in Mr. Bartet's Tavern will be very ſhort, as he now intends going by the way of Niagara to Detroit.

York, 29th April, 1808.

shortcomings were not camouflaged. One provincial painter and former carriage maker, Jean-Baptiste Roy-Audy, offered to return the sitter's payment if a good likeness was not achieved.

From a glance at the subjects in this exhibition, or at others recorded in catalogues, one can see that the more affluent social groups patronized this art, that is, leaders of church and state, professionals and merchants, and hardly ever the working man. There was a price range to choose from, dictated by the medium and the fame of the artist. Silhouettes were the least expensive, being advertised through the first half of the 19th century at 25 cents to $5, depending on how much gilding and framing went with the profile. In 1806 in Montreal miniatures were advertised at about $15; at the same date oil paintings were offered at $20 to $100. Materials and composition influenced prices too. More was demanded for a watercolour miniature on ivory than for one in pencil on paper. Oils were quoted by size, and a composition showing both hands was always more expensive than a simple bust-length portrait. When the daguerreotype (the early photograph on glass) became available in Canada in 1840, it was advertised at from $4 to $5, including the leather case.

Although most of the sitters were well-to-do, very few artists became prosperous. Nonetheless, they were accepted in the best social circles and were able to make a living, in one way or another. To supplement his income, Louis Dulongpré, well known and appreciated as a portrait painter in Montreal, also gave lessons in dancing, singing, and the harpsichord. Less successful painters became travelling tradesmen, picking up business wherever they could find it. In an occupational classification of the city of Hamilton for the years 1851 to 1861,[2] artists are included in Group II in a scale of five socio-economic groups, Group I being the highest. This classification categorizes artists with accountants, musicians, stationers, and undertakers, to mention only a few of the occupations listed; it places them below Archbishops, hardware merchants, and Gentlemen; and above bakers, bricklayers, engravers, and joiners. If the study had included Clients of Artists, they would no doubt have been placed in Group I.

The simplest form of portraiture was the profile or silhouette, which was either cut out of paper or paint-

ed in a solid tone (usually black) on card. For a small additional charge, costume details were added in gold pencil or opaque colours. Some artists traced the image as reflected onto oiled paper, while a hinged contraption called a "pantograph" simultaneously reduced the profile to miniature size. Other artists proudly advertised that they cut profiles free-hand, without mechanical aids. Whatever the methods used, the process was more craft than art; but the little profiles are charming and surprisingly varied in character.

Miniature portraits required much more skill than silhouettes and in this country were usually painted in watercolour on ivory or paper. Tiny stippled or hatched strokes built up images in transparent washes of colour, through which the ivory glowed to add lustre to the flesh tones. Travelling miniaturists often preferred to use paper because a change in temperature could cause the ivory to warp or split. The simplest miniatures are in pencil on paper — like the thousands of small likenesses drawn by Thomas Hanford Wentworth as he travelled through the New England states, the Maritime provinces, and Upper Canada. Since few of the miniatures found among Canadian family heirlooms are signed, it is difficult to know whether they were painted here or abroad. One particularly charming "native" miniature in the ROM collection is Louise Amélie Panet's portrait of her friend Angélique de Lotbinière, painted from memory shortly after Angélique's death in 1818 to console the young girl's parents. The brushwork is more emphatic and the scale of the face is larger than in most European-influenced miniatures of this date.

Louise Amélie Panet had learned to paint from her father-in-law, German-born William Berczy, an excellent portrait painter who moved from York (Toronto) to Montreal in 1803 in search of a larger clientele. He was one of the earliest professional artists to work in both provinces and was one of the few painters in this country to depict groups. His grey wash study of Marguerite Chaboillez McTavish with her children is a tender and graceful record of the young family of fur-trader Simon McTavish. It was probably the preliminary sketch for an oil painting. Berczy's small portraits are austere and accomplished character studies, as evidenced in his pastel profile of John Grey, one of the first directors of the Bank of Montreal.

Interestingly, Berczy often included backgrounds in his portraits—a street seen from a window, or an idyllic landscape, or simply a bookcase.

The small watercolour portrait, which could be called an enlarged miniature, continued to be painted by immigrant English artists until the 1860s. Both William Lockwood and Hoppner Meyer worked in this medium through the forties and fifties, but in order to make a living Meyer also resorted to copying other portraits and colouring photographs. The small portrait was the first to be eclipsed by the advent of photography.

By the 1830s there were established painters in the larger towns, and the oil portrait reached its peak in both popularity and expressiveness. Antoine Plamondon reigned in Quebec City, and the young Théophile Hamel was in training there. To show off his style and attract customers, Joseph Legaré, who was self-taught and remains one of Quebec's most interesting painters, copied a portrait of George IV in coronation robes. His ploy worked so well that the Legislative Assembly bought the life-sized painting, and Legaré received an order for a small copy from the mayor of Montreal, who wished to present it to the Papineau family of Montebello. In an 1834 letter Legaré tells the mayor that he has just placed the painting aboard the steamboat bound for Montreal, and that the delay in shipment was caused by the workman who made the frame. This portrait, showing a doll-like monarch encased in one of the most elaborate frames I have seen, is included in the exhibition as a social and artistic document—a record of the kind of transaction that was probably fairly frequent in Canada in the 1830s.

During the early years of settlement, Upper Canadians had their portraits painted by itinerant artists. Among them was a group of American painters who inspired the young Paul Kane to try his hand at portrait painting. One of these artists, Grove Sheldon Gilbert, submitted a portrait of printer Charles Fothergill to Toronto's first art exhibition in 1834. Contemporary newspaper reviews commented that the portrait was "a good likeness . . . very effective and well

Above: Miniature portrait of Angélique de Lotbinière (1806–1818) painted from memory by her friend Louise Amélie Panet about 1818. (Watercolour on paper, 2 3/4 inches × 2 1/4 inches)

Right: Portrait of Miss Eliza Jane McNally painted at Fredericton in December 1833 by Thomas MacDonald, an itinerant artist whose naive style resembles that of some New England painters of the period. The interior setting adds another dimension to this prim little portrait. (Watercolour on paper, 9 7/8 inches × 8 inches)

painted, but the attitude rather strained". Fothergill himself was an accomplished amateur painter, who also submitted paintings to the same exhibition.

Portraits dominated the entries of the 1834, 1847, and 1848 exhibitions at Toronto. With the arrival of the French portraitist George Theodore Berthon about 1840, the city gained its own "official" painter, who was to portray the wealthy and the powerful for the following 50 years.

Many painters passed through the port of Halifax, including the talented William Valentine who emigrated from England about 1818 and who painted and taught in Halifax until mid-century. He established the city's first photographic studio in 1844, welcoming the new art as did so many other portrait painters.

The exhibition *Canadian Faces* includes examples of many more facets of the art of portraiture than it has been possible to describe here. For many of these portraits we owe a debt of gratitude to those private owners who have taken such good care of our immortalized Canadian ancestors that we can still enjoy them and learn from them today.

[1]*Letters & Papers of John Singleton Copley and Henry Pelham*. The Massachusetts Historical Society, 1914.

[2]Michael B. Katz: *The People of Hamilton, Canada West. Family and Class in a Mid-Nineteenth-Century City*. Harvard University Press, Cambridge, Mass., 1975.

Mary Allodi is Assistant Curator in the Canadiana Department and the author of the two-volume publication Canadian Watercolours and Drawings in the Royal Ontario Museum. *Mrs. Allodi is a graduate of McGill University and of the Institute of Fine Arts, New York University. Prior to joining the* ROM *staff, she worked at the Metropolitan Museum of Art in New York and at the National Gallery of Canada in Ottawa.*

Portrait of a lady from the Seigneurie of Ile Dupas near Montreal, painted about 1825 to 1830 by Jean-Baptiste Roy-Audy. Although naive in style, this painting is probably quite as faithful a likeness of the sitter's wistful features as it is a detailed catalogue of her costume, head-dress, and jewellery. (Private Collection. Oil on canvas, 25 3/4 inches × 21 1/4 inches)

The Growing Collections

The small but fine collection of Russian objects in the European Department has recently been enhanced by the addition of an important document box, the combined gift of Mr. Sidney Bossin and Dr. Morton Shulman.

This object was undoubtedly created by the Russian Imperial arms factory at Tula, a town about 100 miles north of Moscow. The primary concern of the factory, originally founded in 1705 with immigrant craftsmen, was the production of small arms for the Russian Army. This operation evolved, under the reign of Empress Catherine II (1762–1796), to include the manufacture of a number of fine arms for the Imperial court and decorative objects in cut steel.

Decorating with cut steel was practised in most European countries towards the end of the 18th century, but it was at Tula that this art form achieved its greatest refinement. The mode of decoration best suited for this particular technique was rows of steel studs, which were individually riveted, faceted, and highly polished to reflect the light more effectively than did the marcasite decoration that it succeeded.

Made primarily for show, this document box was further embellished by types of decoration that were specialties among Tula craftsmen. Sections of the burnished steel were encrusted with softer metals to give the box an opulent appearance. This technique can be noted on the pierced, garlanded apron, which is decorated with engraved gold and silver flowers. The high standard of decoration was continued throughout the whole of the piece. The exterior panels of the front three drawers, the side panels, and the back panel are all plated with silver, and the drawers themselves, both inside and out, are plated with gold. In typical Russian fashion, an applied section of malachite, a semi-precious stone that was much favoured in Russia during the 18th and 19th centuries, was fastened to the decorated steel top to add to the rich appearance of the object. B. A. M.

Sauce-boats, judging from the numbers that survive, were important accessories in 18th-century English table settings. Though written references to sauces date back at least to the mid-14th century, the earliest containers made specifically for serving them in date from the period of George I, and were of silver. But the use of sauce-boats increased dramatically in the mid-18th century, when the newly established English porcelain factories discovered a public captivated by the novelty of the shapes made possible by the plasticity of porcelain. Sauce-boats, mostly single-handled, were made in great variety: in the shape of shells and various leaves, in forms derived from silver, and in simple boat shapes. Early sauce-boats especially were left white, their appeal dependent entirely on subtle low-relief decoration, but soon many were also being painted with figures, scenes, and floral motifs derived from oriental porcelain, or with flowers, birds, and landscapes in European style.

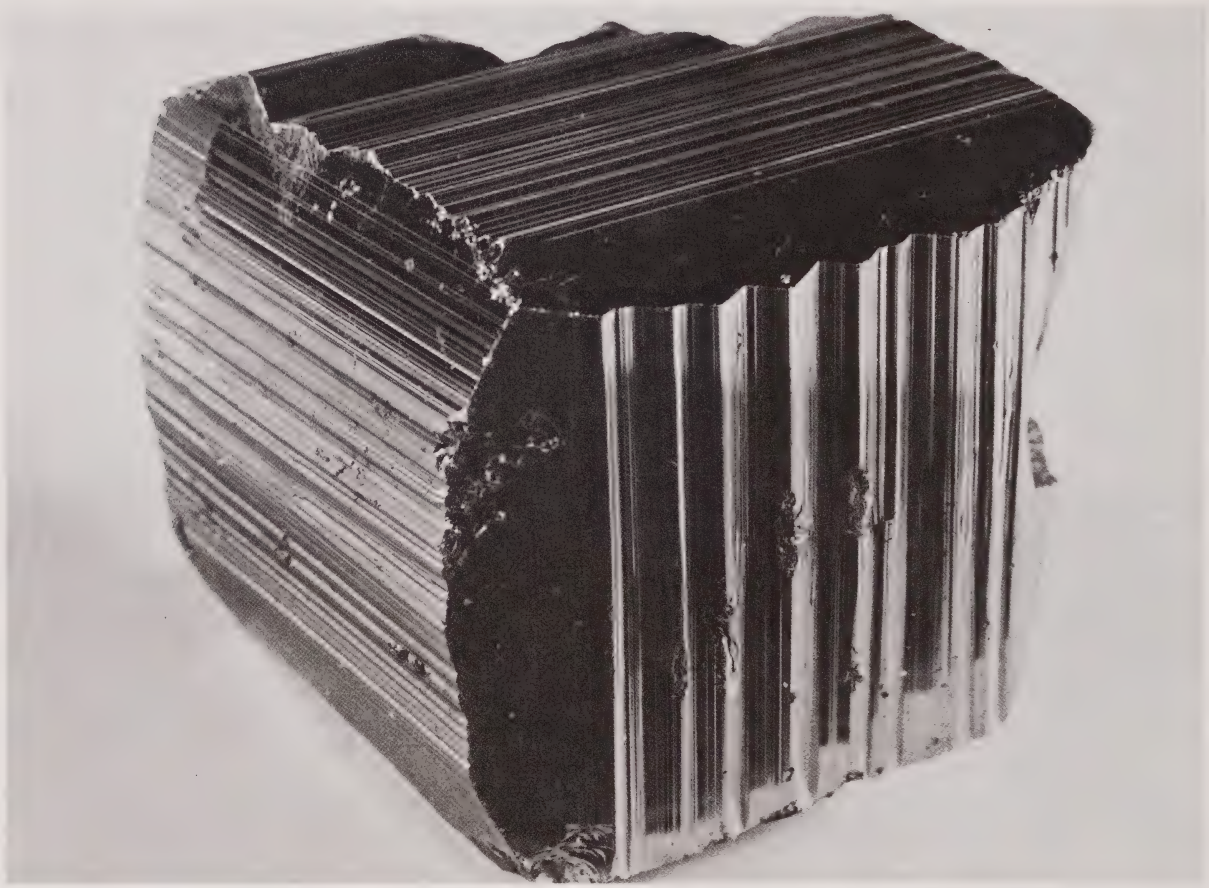
To add to a group of 15 sauce-boats and four cream boats donated to the European Department last year, we have recently received another group of 19 pieces, all the gift of Mr. Norman B. Bell. The examples in this important collection were made at Chelsea, Bow, Derby, Longton Hall, Worcester, Plymouth, and Bristol between 1745 and 1775, though the majority date from 1750 to 1760, a decade in which English porcelain sauce-boats showed their greatest flights of fancy.

The small white sauce-boat (L. 11 cm) is decorated with overlapping acanthus-like leaves, which terminate in four stumpy feet and a twig handle. On the base is the incised triangle mark used at Chelsea, c. 1745–1749. Chelsea cream ewers, teapots, coffee pots, and tea bowls were made with this same relief pattern, which was probably copied from the French Chantilly factory, though the use of naturalistic modelling can be traced to the Chinese, who made porcelain in delicate leaf and vegetable forms.

A much larger Chelsea example (L. 22 cm), with waved rim, elevated scroll handle, and four low feet, reveals its derivation from English silver sauce-boat shapes of the late 1730s. This piece bears no factory mark but can be dated stylistically to c. 1752–1756. Low-relief scrolls on each side frame domestic animals in polychrome enamels attributed to the painter J. H. O'Neale. From a contemporary sale catalogue we know that such Chelsea sauce-boats would have been made in pairs, with matching plates or stands.

By the 1770s taste had turned to the neo-classical, and the delightful rococo creations of porcelain were eclipsed by sober two-handled, vase-shaped or circular sauce tureens made of silver. Not until the early part of the 19th century did ceramic containers for sauces, in the form of small tureens rather than sauce-boats, reappear in quantity as parts of large dinner services.

Mr. Bell's gift is very important, both as a group which illustrates the great range of sauce-boat forms and decoration, and as individual pieces which fit into and amplify our existing collections of English porcelain. J. B.



Additions to the mineral collections include TYPE material of the new mineral fletcherite, donated by Dr. J. R. Craig of Virginia Polytechnic Institute. Other species not previously represented in the collections are tochilinite from Cornwall, Pennsylvania (presented by Mrs. E. Galt); iranite, Iran; foggite, Western Australia; saffianikoffite, Zaire; canavesite, Italy; parakeldyshite, Norway; dypingite and paraspurrite, California; kraisslite, New Jersey; and challanite, South Dakota.

At the 1977 Greater Detroit Gem and Mineral Show a number of pyrite specimens were purchased. These were chosen because they exhibited some unusual crystal forms or because they were particularly fine examples. Two crystals are worth special mention, both from the Kassandra Peninsula in Greece. One is a textbook example of oscillatory growth between the cube and the pyritohedron (above) and the other, although only part of a crystal, exhibits a dominant diploid (left). The diploid is not an uncommon form in pyrite crystals, but it is rare as a dominating form.

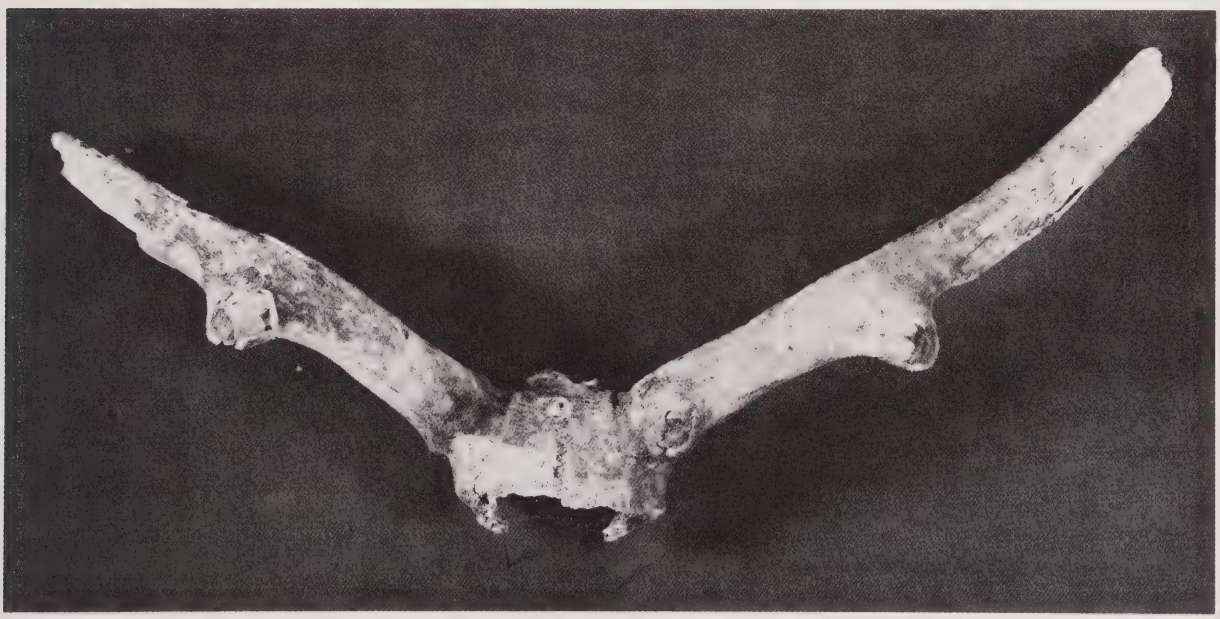
R. I. G.

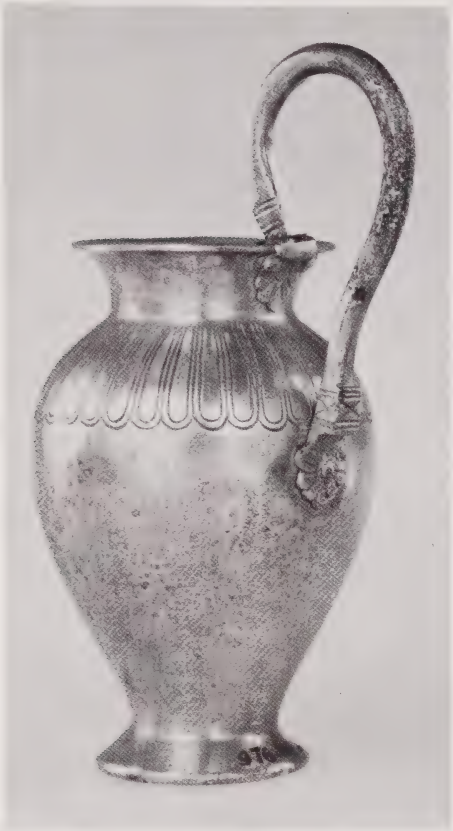
A partial skull of a fossil deer (Cervidae) with portions of the antlers was acquired recently by the Mammalogy Department from the Toronto Transit Commission (TTC). The specimen was discovered by construction workers during the excavation of the western portal for the extension of the TTC subway line west of Islington Station. Carbon-14 analysis revealed an age of 11,315 ± 315 years before present, a time shortly after the last ice sheet (Wisconsin) retreated from this region of Ontario. Dr. R. L. Peterson (Mammalogy Department) and Dr. C. S. Churcher (Zoology Department, University of Toronto) have compared the specimen with living and fossil deer material and, as it cannot be assigned to any of the known Recent or Pleistocene genera, the skull apparently represents a genus and species new to science. Drs. Peterson and Churcher are now preparing a scientific paper that will describe and name this unusual specimen.

D. N.

The Canadiana Department has recently acquired a fine Georgian mahogany-cased bracket clock, c. 1795, by James Grant of Montreal, whose name is engraved on the works. Eighteenth-century Canadian clocks are extremely rare, and this clock is the only known example of Grant's work.

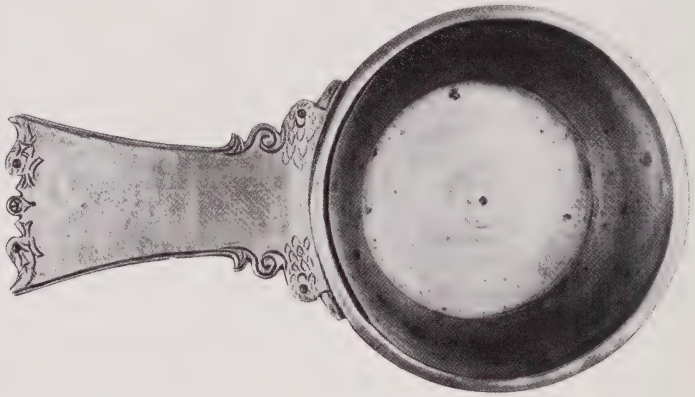
D. B. W.





The Greek and Roman Department has enriched its collections with a group of ancient silver ware consisting of a Greek juglet and small ladle, and a Roman saucepan (*trulla*). The elegant juglet is a fine example of Greek, probably Ionian, metalwork. Very few comparable pieces have been preserved, and the date of our juglet must remain uncertain although some of its features, such as the tongue pattern on the shoulder and the type of the palmette decorating the handle, point to the late archaic or early classical period (6th to 5th century B.C.). The small ladle with a long handle terminating in a duck's head is probably contemporary with the juglet.

The Roman *trulla* is a variant of a well-known type of which many examples have been found in various parts of the Empire. This one has certain peculiarities, which may indicate that it is either fairly late or from an unknown provincial workshop. N. L.



The Textile Department has recently received from Miss Hilda Simister a gift of three costume accessories, which are of special interest because of their documentation. Their origins exemplify those of many early Ontario "best" costumes and accessories.

A woman's fashionable red wool shawl, embroidered with brightly coloured silk threads, was brought, or sent, from India in 1822 and was worn in Canada by the wife of a Colonel Wardlaw. Shawls imported from the East were enormously popular during the early 19th century, but were soon eclipsed by the products of Paisley, Norwich, and Lyon.

A black silk pouch purse decorated with fish scales is of the same period as the shawl. It was made in England and brought out to Canada, along with a small bag of extra fish scales. These indicate that such embellishments were applied domestically, and the bag itself is typical of that period, when ladies made their fashionable accessories at home.

The third item of this gift is a baby's bonnet of fine white cotton worked in Ayrshire embroidery. It belonged to the Reverend Mark Young Stark, who was born in 1799 in Dunfermline, Scotland, and who emigrated to Canada in 1833 to become minister of Knox Presbyterian Church in Dundas, Ontario. M. H.

There is an increasing interest in and appreciation of the contemporary art of Native peoples in Canada and other countries. From April 27 to May 24, 1976, "Art of Aboriginal Australia" was presented in Exhibition Hall of the Royal Ontario Museum by Rothmans of Pall Mall Canada, Ltd. For many Museum visitors this show provided a first exposure to the intriguing contemporary artwork of Native Australians. The Ethnology Department has been fortunate to receive a number of bark paintings and wood sculptures from this exhibit, kindly donated by Rothmans of Pall Mall Canada, Ltd.

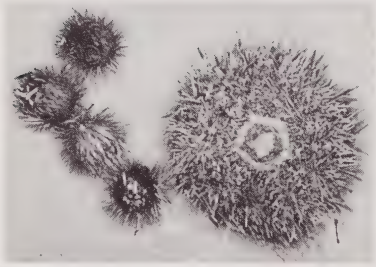
The bark paintings are from two areas, the Western Desert Region, and Arnhem Land, in the northern district. Tribal myths, dreams, events, medical lore, and wildlife are depicted on bark in paints made from natural pigments such as ochres, gypsum, and charcoal. Paint brushes are fashioned from green twigs or stringy bark.

Each artist's work is an individual expression of the traditional culture of the Aborigines, reflecting the mythological past with the present. Archaeological cave sites have revealed wall paintings thousands of years old that are considered ancestral to those produced on bark today.

The donation of this artwork to the Ethnology Department assists in furthering our knowledge and understanding of the life and culture of the Native people of Australia. M. T.

Similar Characters

Why Do Some Animals Look Like Plants?



Renate Carson

The man in the wilderness asked me
How many strawberries grew in the sea.
I answered him as I thought good
As many as red herrings grew in the wood.

Mother Goose Nursery Rhyme

ONE DAY LAST AUTUMN while I was cleaning shelves in the Invertebrate Collection, I found a dried sponge. It gave me an idea: just perfect for a winter bouquet, I thought. That morning on my way to work I had noticed a patch of dry thistles in a vacant lot. In the evening I took the carefully wrapped sponge with me and went back to the vacant lot to pick the thistles. The finished bouquet, arranged in a pottery vase, was very pleasing, and it was not an ordinary bouquet, since mixed in with the weeds was the glass sponge Hyalonema—hard to spot among the dry thistles, for like them it is grey and grows on a long stalk.

As I stood admiring my handiwork, I tried to imagine what the sponge must have been like when it was still rooted on the substrate at the bottom of the deep sea. Every gentle current would have made it sway on its slender stalk, flexing and bending to take in small food particles from the water and pass out waste and the reproductive products necessary for the propagation of the species.

For a long time sponges were thought to be plants. It was not until the mid-18th century, when an Englishman named John Ellis placed a feeding sponge under the lens of a microscope, that it became clear that sponges are animals, and since then they have been considered part of the animal kingdom.

As I continued working through the collection, I found other examples of animals that look like plants. Why do they look like plants, I wondered. What good does the resemblance do them, if any? I was determined to find out.

One thing I learned was that many stalked animals exist. For

Opposite page, top: Sea urchins look like large sticky burs. (Photo: Helen Sutton)

Opposite page, bottom: Bryozoa form shrubby, sheet-like, foliaceous colonies. (Photo: Helen Sutton)

Left: Model of a sea lily.

example, the sea lily, a close relative of the starfish, has a calyx-shaped body at the top of a long stalk. Because the body is lifted clear of the substrate, mud and debris do not clog its openings, and mud-free body openings are essential to animals that depend on a water vascular system that circulates water efficiently through the body.

In place of leaves, clawed, grasping fingers spring from the stalk of the sea lily and five arms, which simulate the petals of a lily, grow from the sides of the body. Food particles passing within reach of the outstretched arms are gleaned from the water. Some species of sea lilies bear brood chambers on these arms, from which the larvae are liberated, to be carried away by water currents. Eventually the larvae mature and sink to the bottom at some distance from the parent — far enough away to reduce competition for the sparse food supplies of the deep ocean. There the larvae settle and metamorphose into new sea lilies.

Stalked relatives of the corals — the sea pens, the sea fans, the gorgonians, and the hydroids — often grow in masses, forming dense patches on the sea floor. The shrubby clumps create miniature jungles, which many sea creatures use for concealment.

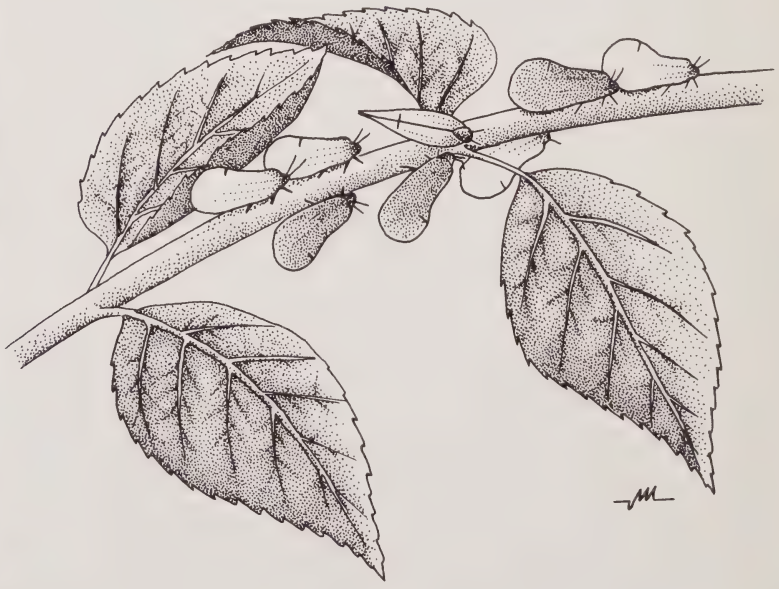
Among the shrubby animals belong some species of the less well-known Bryozoa, which frequently construct massive reefs. These Bryozoa usually grow on stalks called stolons and are often mistaken for seaweeds. Other Bryozoa grow as foliaceous sheets or as encrustations on stones and wharfs or on other organisms. The microscopic individuals, which live in skeletal boxes, can exist only as members of a colony. Inside the box, the animal leads a sheltered existence. Nothing but the feeding organ, a crown of tentacles, protrudes, and that only when the animal is feeding. When it is not feeding, the organ is retracted into the box, which in some marine forms closes by means of a hinged lid. Frequently Bryozoa assume specialized shapes to perform specific tasks in the colony, such as feeding, reproducing, or defending the colony.

Stalk bearers derive several advantages from their stalks. The stalk lifts the animal's body off the substrate so that the organism is able to collect food over a greater radius, just as a stalked plant is better able to absorb sunlight. And the stalk makes for better sperm and larval distribution, since it permits water to circulate around the body of the animal from all sides, in the same way that wind circulates around a stalked plant, dispersing pollen and seeds. The stalk connects the animal's body to the anchoring roots, and sometimes it accommodates branching, grasping structures with which the animal can cling to rocks or to other animals to keep from being buried in the mud. This is true for the sea lily.

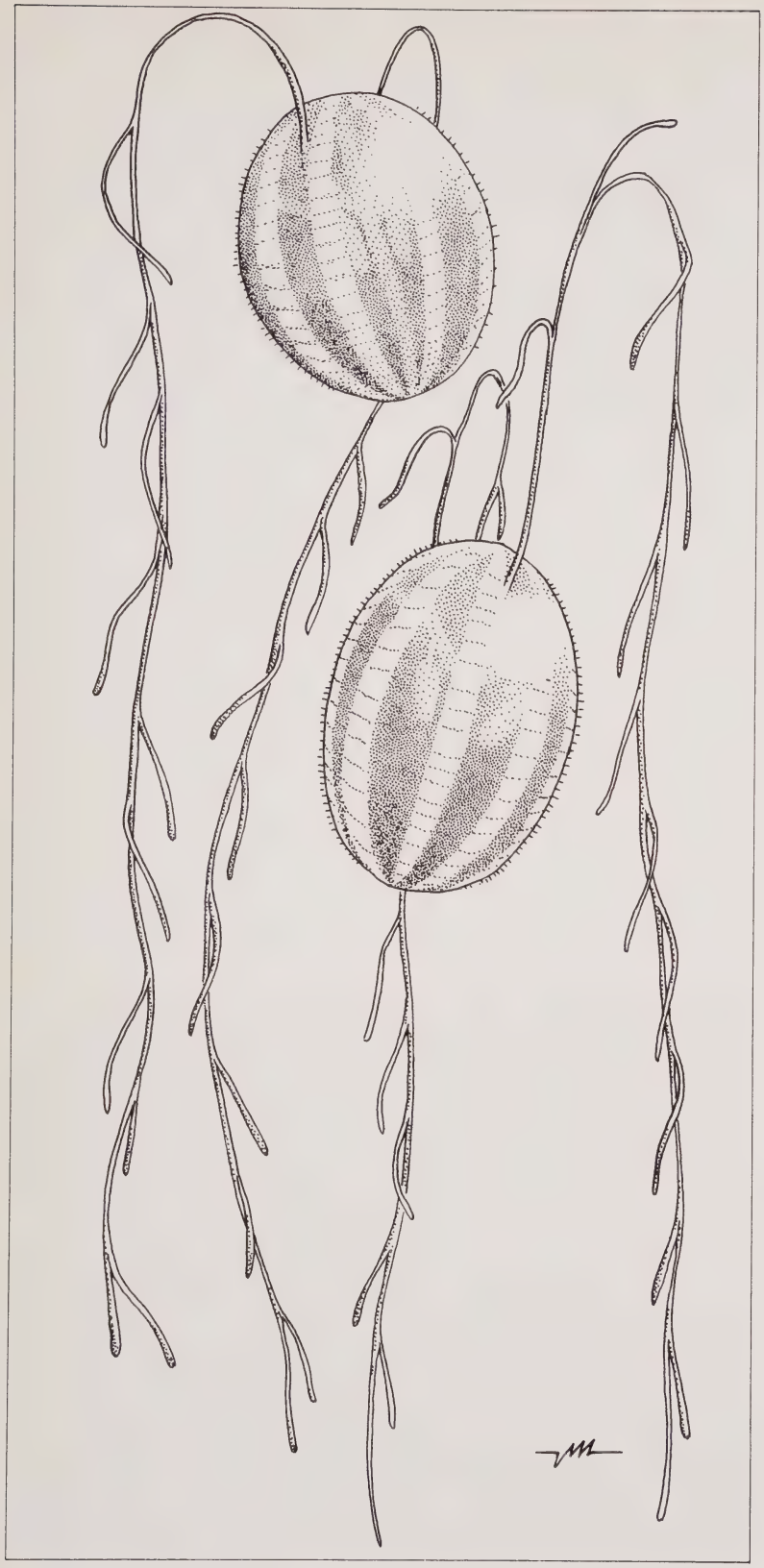
Thus stalks are structures that perform a number of similar functions in animals and in plants and therefore they are said to be analogous, although usually anatomically they are quite dissimilar. In plants the stalks house the vascular pathways for nutrients, in the sponge the stalk is an extension of the root tuft, in the sea lily it is a skeletal column, and in the Bryozoa it is a partitioned tube containing tissue tracts.

The quest did not end with stalked animals. In the collection there are some preserved sea ur-

The glass sponge is hard to spot among the weeds. (Photo: Helen Sutton)



These cicadas may be a mutation that survived because the animals mimic branches of blossoming shrubs. (Drawing: Julian Mulock)



chins that remind me of sticky burs, even though burs are much smaller. Like the burs they resemble, sea urchins are almost spherical and covered with pointed spines; preserved in alcohol they are a greenish brown colour.

Burs are seed cases with spines that terminate in long stiff hooks, which can become attached to animals' fur, or to peoples' clothes. By the time the burs drop off, or are pulled off, they have usually been carried some distance, and in this way the seeds are dispersed. At the same time they are safe, for animals would hesitate to eat the prickly seed case. In sea urchins, the spines are part of the skeletal test that protects the soft parts of the animal's body. They lock into the rigid test surface by means of concave sockets, and they can be oriented in different directions to help the animal keep its balance as it walks on its tiny tube feet. Moreover, they constitute a formidable armour, for they are very brittle and break off easily if the animal is stepped on, and they cannot be removed from the offending foot, even with forceps, but must be left in the wound to dissolve (the process takes about three weeks). The very apt Latin name for the sea urchin is Echinoid, which means "like a hedgehog".

Just as the stalks of animals and of plants do, the spines of the bur and of the sea urchin differ anatomically. Urchin spines are part of the internal skeleton, whereas the spines of the sticky bur are desiccated bracts.

In the collection at the ROM there are some stony coral skeletons that were collected south of Newfoundland. In stony corals the soft coral polyp lives attached to a skeleton of calcium carbonate. Stony corals comprise mainly the colonial animals that build the massive coral reefs in the tropical seas. The corals at the ROM are unusual because they are skeletons of solitary corals dredged from cold water, and they

Sea gooseberries look like gooseberries because of their shape and the pattern of stripes. (Drawing: Julian Mulock)

look like the tasty yellow mushroom people call the chanterelle.

In the mushroom, a stumpy stipe lifts an umbrella-shaped cap off the ground. On the underside of the umbrella there are radial partitions. From these partitions, or gills, fine spore-bearing threads project laterally into the grooves between them. When the cap is cut off and placed on a sheet of paper, gills down, a radial pattern will be formed by the falling spores.

In the coral skeleton too there is an umbrella at the top of a stony column, but it is upside down. Its upper surface is divided by septal partitions into wedge-shaped grooves. In some tropical mushroom corals the umbrella expands widely and is cast off with the soft parts as a young coral bud, which continues to live as a free, solitary coral on the ocean floor. The parent produces many buds of this kind.

So the umbrella shape has been adapted for two diverse biological structures, the fruiting body in the mushroom and a stony supporting skeleton in the coral. In both organisms it is a suitable shape for purposes of propagation, and in the coral it has the additional function of providing anchorage for the polyp.

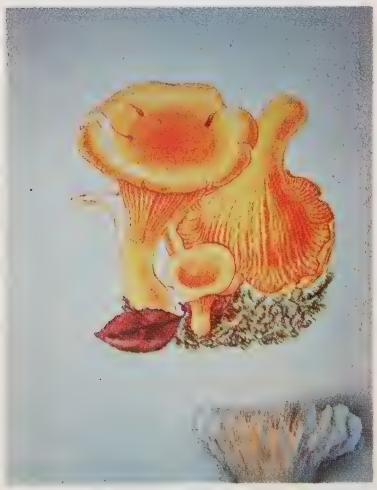
In one of the aquaria in the Gallery of Invertebrate Palaeontology there are some fan worms whose crowns of tentacles make them look as delicate and colourful as the asters that bloom in autumn gardens in Ontario. Fan worms are distant relatives of the common earthworm, but they live at the bottom of the sea in tubes composed of sand and gravel from the substrate, which the worms cement with mucus exuded from their bodies.

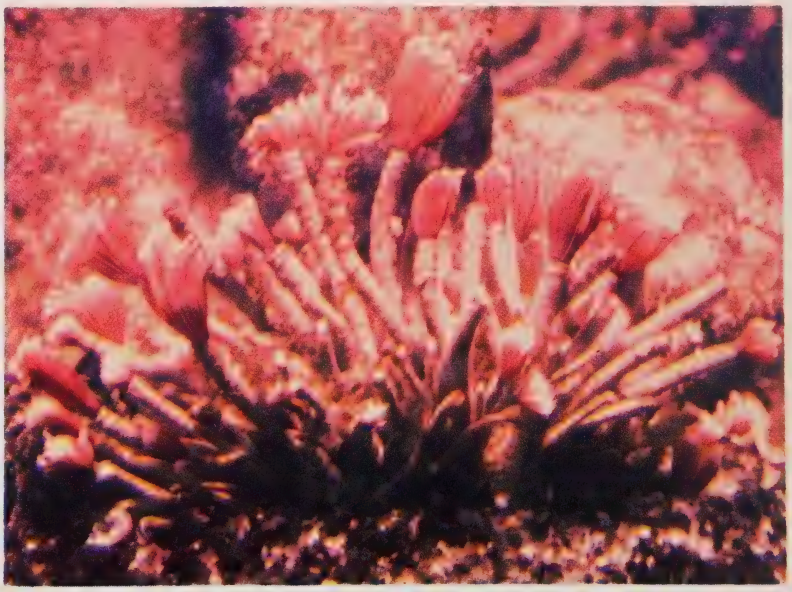
Although the fan worm can move up and down inside the tube, it never leaves it. Only the feeding organ protrudes at times. It is shaped like a wide funnel composed of rays — the ciliated tentacles — which simulate the head of a composite flower. The cilia stir up a turbulence in the water and filter out plankton, which is caught on the tentacles. Then the particles are dropped down the funnel into the mouth concealed at its bottom. At the slightest shadow in the water, sense organs located on the tentacles signal danger and effect the immediate withdrawal of the feeding organ, so that the fan worm can live in relative safety in a hostile environment.

The fan worm's resemblance to a flower is superficial. There is no functional or structural relationship. In the composite, the corolla of each floret protects the reproductive organs of the flower, and its bright colour attracts pollen-collecting bumblebees.

Even the popular names of some aquatic forms are taken from plants. We speak of sea cucumbers, which are relatives of the starfishes; of sea pansies, which are related to corals; and of sea potatoes and sea peaches, which are sea-squirts. In the surface waters of the sea float plankton-like organisms called sea gooseberries, well camouflaged by the gelatinous body content that renders them transparent. Only eight longitudinal lines, connecting the poles of the sub-spherical body, show up clearly. They are organs of locomotion, which help the animal to swim a little, with its mouth pointing downward to the bottom of the sea. By means of two long tentacles dangling down at the sides of the body, the sea gooseberry catches small animals for food. The round shape, combined with the stripes, gave this delicate creature the name of a common garden fruit.

Some other organisms have not acquired popular names but nonetheless look like ordinary plants. For example, the polyp of the genus *Ricordia* has a rounded green body and resembles a pea. In this animal, many polyps grow together from a common mat attached to the substrate, and they look green





Above: The coral skeleton looks like a mushroom with the cap turned upside down. (Photo: Helen Sutton)

because they contain algal cells beneath the transparent body wall. The algae live in symbiosis with the coral polyp and provide it with oxygen and other foods, while feeding on the waste products of the polyp. No functional characters are shared with the seed of the pea plant.

It would be wrong to create the impression that only aquatic animals resemble plants. The African cicadas illustrated in the drawing aggregate in groups to simulate the branch of a blossoming shrub. Their wings are white and green or white and yellow, and when the insects are perched on a twig with folded wings, they so perfectly mimic a blossoming shrub that even knowledgeable persons have been deceived by them. These cicadas represent a most unusual example of the principle of "the survival of the fittest", utilizing mimicry to avoid predation.

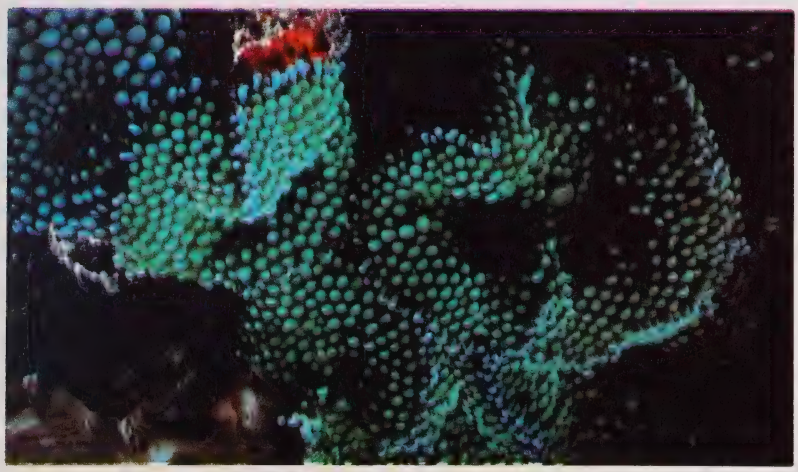
In pursuit of an answer to my question, I took a journey into the past. Standing in front of the aquarium in the Gallery of Invertebrate Palaeontology, I thought about the beauty of the animals and pondered the variety of their shapes. In many cases the older the group to which the animals belong, the more plant-like characteristics they seem to display.

It is a general belief that life started in the sea and that primitive plants existed before the first multicelled animals. Could it be possible that in very old animal groups there was not enough time for new characters to evolve?

Interestingly, nature often is rather conservative in the range of solutions she finds to different ecological problems. In the animals and plants I have talked about, spines can be used for locomotion, for seed dispersal, and for protection; stalks can be used for support, for attachment to other structures, and for the transport of nutrients. The same characters are repeated over and over again and appear to be advantageous to the organisms that possess them. On the other hand, animals such as the tube worm and the sea gooseberry bear no functional relation whatever to their plant counterparts.

In general, life processes are repetitive. Every life has a beginning and an ending, with intervening stages of immaturity, maturity, and decline; every organism must have nutrients and all organisms reproduce. Similarity in shape, often coupled with similarity in function, is simply one other expression of repetitive features in living things, and these can develop in independent evolutionary lines.

Renate Carson joined the ROM in 1976 and is a Curatorial Assistant in the Department of Invertebrate Zoology. She was born in Czechoslovakia and educated in England and the United States, where she obtained an M.Sc. in biology from the American University. After a short teaching career she joined the staff of the Smithsonian Oceanographic Sorting Center in Washington, D.C. Work with marine invertebrates roused her interest in their morphology and especially in the structure of members of the Phylum Bryozoa. Prior to her move to Canada in September 1975 Ms Carson spent a summer at the Marine Biological Laboratory in Woods Hole, Massachusetts.



Above: Coral relatives that look like peas. (Photo: Steven D. Bach)

Left: Feeding tube worms in the aquarium in the Gallery of Invertebrate Palaeontology.

An Ancient Trading Centre

Istanbul and Its Bazaars

Veronika and Michael Gervers

STAMBOUL . . . . *Stamboul*. . . . The whispered words were repeated by an entranced Turkish villager high in the mountains of eastern Anatolia when we told him where we had just come from. That we were from Canada impressed him much less than the fact this leg of our journey had started in the fabled city on the shores of the Golden Horn—the economic, political, and cultural centre of the late Roman, Byzantine, and Ottoman Turkish empires. Situated on the border of Europe and Asia, Istanbul occupies one of the world's most strategic points and was geographically destined to be a capital.

For centuries Istanbul has fascinated easterners, and it has an enduring hold on the imagination of westerners as well. The old city, bounded to the north by the Golden Horn and to the east by the Bosphorus, stands at the crossroads of maritime traffic between the Mediterranean and the Black Sea. All the ancient Roman roads from the west met at the square in front of the Hagia Sophia.

No matter what the hour of the day, no matter what the viewing point, the silhouette of the city, with its countless domes and minarets, is breathtaking, and recalls

ZAMBO

Istanbul in the late 18th century from the hills of Çamlıca on the Asiatic side of the Bosphorus. Watercolour in the collection of Mrs. K. B. Brett.

childhood impressions of the splendours of oriental fairy tales. Walking through the city's streets, however, one is plunged into a more earthly existence. Pavements, where there are any, are poorly kept; excavations in the sidewalks are common. Garbage collection exists, but is by no means city wide, and burning rubbish in the side streets is a common sight, not only in the poorer districts but also in the business quarters. The Golden Horn and the Bosphorus are filled with debris. The abundance of cats points to practicality in vermin control. Though the city may seem poor by some standards, its appearance undoubtedly owes a great deal to that of medieval Constantinople.

It is hard to detect much rational organization in the development of the post-Byzantine city. With the exception of the Topkapı Palace and the mosques with their dependent structures, there are no major Turkish monuments, or neighbourhoods that might be said to form comprehensive architectural ensembles. The Theodosian walls still encircle most of old Istanbul, and the foundations and ruins of numerous Byzantine monuments support Ottoman structures, built precariously against them. Because devastating fires in past centuries razed entire districts, there are few houses of great antiquity. Many of the fields within the Byzantine walls, which used to produce the food for Constantinople, lie idle, although some are still used for agriculture. Moreover, it is not uncommon to find a cow grazing on the slope behind the Blue Mosque or a goat in the Hippodrome.

Despite this apparently disorganized and occasionally bucolic tone, the city has a real core, an

old core, which is neither religious nor political. It is the extensive market area, stretching from the Galata Bridge to Beyazit. Within this complex stands the famous *Kapalı Çarşı* or Covered Bazaar, which encompasses a maze of streets lined with thousands of small shops and boutiques.

The Covered Bazaar is, and has always been, both a commercial hub and a centre of social life. Through the associations of merchants and craftsmen, survivals of a former guild system, business is discussed here, ideas are exchanged, news is spread about, and partnerships are formed. The mosques of the Bazaar, where merchants gather frequently to pray, provide further opportunities for communication.

It is to this Bazaar that most of Istanbul comes to shop, and that Anatolian villagers come to sell their rugs and jewellery, and invest their gains in a wide range of commercial wares. Whether from Europe or North America, from neighbouring Arab lands, or from Russian ships, most foreigners visit the Bazaar. The merchants who deal with them frequently speak four or more languages.

Among the local shoppers, many have no intention of buying anything. They come, nevertheless, to pass the time looking about, meeting friends, and sipping tea, coffee, or Coca Cola. Almost every building has its teamaker or *çaycı*, who frequently doubles as concierge and janitor. His customers (generally inhabitants or employees of the building who have also come to order refreshment for their own customers) often sit down with their drink and relax with a cigarette or a water pipe. Tea and less frequently coffee are carried on order to shops, where the tally of the day's consumption is marked on the doorframe with chalk. Although typical and very pleasant, the usually tiny *çay evis* (tea houses) can hardly be described as glamorous places, but they are always busy. Interestingly enough, neither tea nor coffee is ever prepared in a restaurant; it is always brought in from a *çaycı* or *kahveci* (coffee maker).

In the past, Turkish women had little freedom outside their harems, but they were allowed to shop in the Bazaar in the company of chaperons, usually older women or black slaves. Needless to say, shopping was not necessarily the prime attraction of the expedition; mainly they sought diversion and contact with the outside world. Today the harems have gone, but the Covered Bazaar still generates an atmosphere of excitement.

Those who pass through Istanbul on a flying visit, or spend a day there in the course of a Mediterranean cruise, usually go away with the impression that the Bazaar is somewhat of a tourist trap and a market for trinkets and souvenirs. It is true that most articles on display are ordinary commercial products, such as we might expect to find in a bargain basement or a hardware store. Inexpensive factory-made clothing and cheap yardage and footwear form a large part of the goods available. Copper once ruled supreme in the household, but now it has been replaced by aluminium for coffee pots and cooking vessels, and plastic for virtually everything else.

Above: A section of the Carpet Bazaar.

Left: Copper shop of Emin Bahçekapılı at Beyazit. (Photos: Lütfi Erkan)

The throngs edging their way through the narrow streets of the Bazaar retain little of the colourful costumes of the past — so vividly described by all early travellers — which frequently served as inspiration for the fashions of the West. Because of social reforms tending towards westernization, the great variety of garments, the brilliant colours, the large turbans, the fez, and the veils of the urban women have largely disappeared. Variety has been supplanted by the dull conformity of often outmoded western dress.

These are, however, only surface manifestations. Behind the bright lights of the main streets in the Covered Bazaar, behind the cheap trinkets and drab costume, there lies a very different world, seldom seen by the outsider. The creative activity of this bustling, noisy, and confusing market goes on out of sight, in the backs of shops, in tiny second-floor rooms, and in the old "caravanserais" or *hans*, to be found at the end of each dark and narrow passage leading off the main thoroughfares. The outsider would think twice before penetrating into these unglamorous and dingy places, interesting though they are.

In the light of historical evidence, it is clear that the Bazaar has retained much of its organization from the time of the Golden Age of Ottoman power in the 16th and 17th centuries. It is equally apparent that this organization predates even the Ottoman period, for many guild regulations and the hierarchy within the guilds, still current in the first decades of this century, are described in the *Book of the Prefect*, dating from the beginning of the 10th century and attributed to the Emperor Leo VI.

A thorough study of today's Bazaar can still provide us with an understanding of the city's crafts and commerce in centuries past and of the changes that have occurred over the years. The Corps of the Janissaries (Christian-born, paid soldiers who were the sultan's most powerful weapon) once had a special section of the Bazaar for

their personal provisions, and on declaration of war numerous artisans used to accompany the troops to keep them supplied. The Janissaries, however, were abolished early in the last century. Then with the end of the rule of the Ottoman sultans, the demand for articles produced by craftsmen dwindled again. Oriental luxury goods, which were once exchanged in the Bazaar, are no longer in demand. With the advent of industrialization, and the consequent availability of factory-produced goods, many of the traditional crafts have completely disappeared from Istanbul, although some have survived to a certain extent in Anatolia. Even those crafts that still appear to be flourishing produce for a relatively limited market, and not necessarily quality goods.

In former times quality was controlled not by the guilds but by the state or municipality. Most of these controls have been rescinded, and standards are maintained largely through the pressures of competition. Decisions regarding the carat content of gold jewellery, for example, are left to the jewellers. The only exceptions are bangles made of 22-carat gold, and gold coins, whose quality is controlled by the state, since the Turks, to whom personal savings accounts are virtually unknown, invest in them as a hedge against inflation.

The physical layout of the Bazaar is ancient, as is the custom of concentrating the sale or production of a particular item in a single area. If many of these areas have changed over the centuries, the *Bedestan*, a vaulted building containing a series of shops in the centre of the Covered Bazaar, has continued to deal in treasures and exceptional antiquities. It was in the *Bedestan* that arms and armour, pearls and other jewels, the famous silks of Bursa, the cashmere of India and Persia, and all the rarities of the Orient were traditionally offered for sale.

Opposite page: Mehmet Akgüngör, a Karagöz (Turkish shadow puppets) player from Bursa, selling biscuits called peynir tatlısı *near the Mosque of Rüstem Paşa at Eminönü. (Photo: Michael Gervers)*

Below: Cotton dyeing in the workshop of Boyacı Şukuru in Çukur Han, near the Covered Bazaar. (Photo: Lütfi Erkan)

Right: Fisherman selling freshly caught fish at Karaköy, near the Galata Bridge. (Photo: Michael Gervers)

Below: Rug repairing in the workshop of Abdullah Turgut at Sarnıçlı Han, Beyazit. (Photo: Lütfi Erkan)

Because the *Bedestan* used to house incalculable and astonishing riches, it was, and still is, protected by heavy gates and security guards. When departing for a long journey, the inhabitants of Istanbul customarily deposited their valuables for safekeeping with the merchants there, just as we might rent a safety deposit box in a bank. The *Bedestan* was considered so precious that smoking was strictly forbidden within its walls until fairly recent times. Such a prohibition indicates clearly the awe in which it was held, for, as Gautier, a mid-19th-century French traveller, stressed, a "Turkish fatalist would, ordinarily, light his pipe while sitting in a powder magazine".

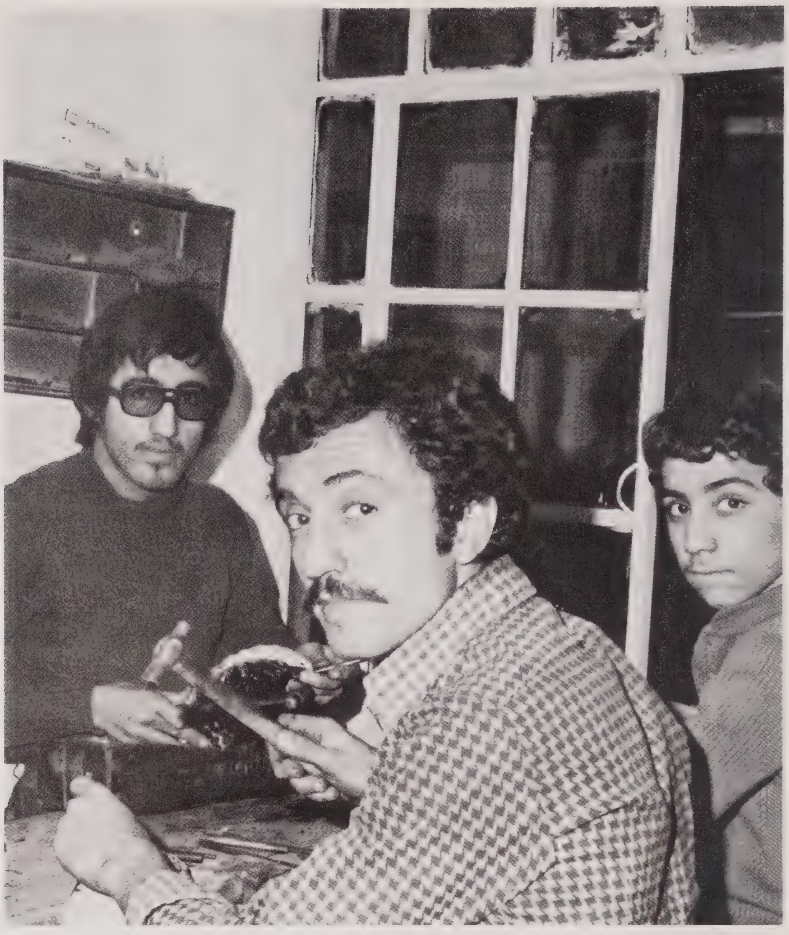
Though the great glories of the *Bedestan* have faded away, it is still an exciting part of the Bazaar. Well-to-do, even millionaire, merchants deal here in articles ranging from old jewellery to 17th- and 18th-century embroideries, antique rugs, and Greek or Russian icons. Most of the shops are actually no more than booths, in which there is hardly room enough for three or four people to sit. While interviewing merchants, we often had to step outside to make room for a customer.

Despite the special nature of the goods in the *Bedestan*, the articles are seldom presented to their best advantage. Objects from textiles to jewellery are piled one on top of another, or hidden away in chests and suitcases. Precious stones, often of enormous value, are stowed away in insignificant, worn cardboard boxes. The small, dark shop windows, when there are any, display a variety of items in arbitrary disorder. The finest pieces are not shown at all. To see them a customer must convince the merchant of his sincere interest, and sometimes too of his willingness to spend his money. Often a token object of lesser quality and lower price must be purchased before the merchant feels it is worth his while to bring out the better pieces. Once a dealer has ascertained a customer's taste and the seriousness of his intentions, he will do his utmost to please, even to the extent of bringing in pieces from a colleague's shop if he does not possess the desired item himself. Such a relationship, however, cannot be established quickly. In the East, one should in fact never hurry, and certainly never press others, who are not used to, and have difficulty understanding, the pace of a westerner's lifestyle and his impatience in the face of delay.

The merchants of the *Bedestan* are often exceptionally well educated. Many of them have university degrees, and some have attended European colleges. They are also well aware of the real value of their goods and of international market prices; a few of them even have a small reference library. The same is true of the carpet dealers. They, however, seldom have a shop in the *Bedestan*; their quarters are located just outside this prestigious area of the Bazaar.

Moving out of the *Bedestan* and into the dark passages leading off the main streets of the Bazaar, one finds all sorts of industrial activities going on in the surrounding *hans*. We visited only a few of these places, but we came across a varie-

Corner of Metin Erin's rug shop. "The Brothers", Covered Bazaar. (Photo: Lütfi Erkan)



The workshop of Mercan Tığalar, an Armenian silversmith from Zara, Sivas, in Pastırmacı Han, near the Covered Bazaar. (Photo: Lütfi Erkan)

ty of pursuits: textile dyeing, spinning, weaving, woodblock printing, rug repairing, and jewellery making. Today these crafts are for the most part performed by machine or with the assistance of machines, though generally the output is on a very small scale. By some miracle they frequently still exist in the same old physical environment as their unmechanized predecessors. Many ateliers are to be found in rooftop sheds, perched overlooking the Bazaar, for space in the city is at a premium, and production and commerce go on wherever space is available.

All the glittering gold, sold in hundreds of shops and largely to Turkish customers, comes from the tiny ateliers of a number of *hans* situated in and around the Bazaar. Containing often as many as 50 workshops, these *hans* are reserved solely for artisans who work in precious metals. Gold jewellery and silver vessels are to be seen everywhere in various stages of production, and the sound of hammering, chiselling, and the jet of blow torches is ceaseless.

Outside the gates of the Covered Bazaar there are innumerable other interesting markets. Near the university at Beyazit is the famous Book Bazaar, which in the 16th century lay within the walls of *Kapalı Çarşı*. It was there, presumably, that Busbecq, the imperial ambassador, found "whole wagon-loads, whole shiploads of Greek manuscripts", of which no fewer than 240 volumes were sent to Vienna for the imperial library. Busbecq deeply regretted having to pass up "a manuscript of Dioscurides, extremely ancient and written in majuscules, with drawings of the plants and a small treatise on birds. It belongs to a Jew, the son of Hamon, who, while alive, was physician to Suleiman the Magnificent. I should like to have bought it, but the price frightened me; for a hundred ducats [in gold] was named. The manuscript, owing to its age, is in a bad state, being externally so worm-eaten that scarcely anyone, if he saw it lying in the road, would bother to pick it up."

Busbecq's testimony to the availability of Greek manuscripts in mid-16th-century Istanbul, and especially to this exceptional volume, is of great interest, and it is clear from his description that the value of antiquities was already appreciated at that time.

Such rarities as this Dioscurides manuscript are no longer available, and the shops of the Book Bazaar do most of their trade with the uni-

versity community. Some shops, on the other hand, may still have a collection of earlier Islamic manuscripts, whose volumes or leaves are reserved for customers with a reputation.

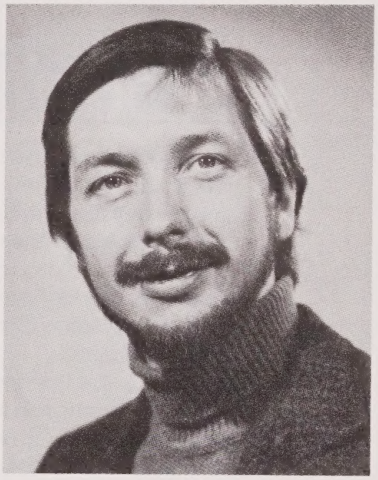
The Copper Bazaar, also at Beyazit, provides a valuable insight into the advance of technology as well as into a new type of antique dealing. Relatively recent articles of everyday use (found in every household and in the kitchens of restaurants, and used by innumerable street vendors just a few decades ago, and still used in the hinterlands of Anatolia) have suddenly become sought-after symbols of an almost bygone Turkish life. There is an enormous demand for copper vessels, not only for export to the specialty and department stores of the West, but for the Turks themselves, for whom they revive memories of childhood and of summer vacations in the country. If a particular article is in short supply, there is no lack of competent coppersmiths capable of producing exact replicas. Older types of covered coffee pots with a large beak, common in Arab lands and known also in Turkey near the Syrian border, are rare but highly esteemed. Thus one of the shops in the Copper Bazaar turns out good-looking copies on a production line, and once they reach the open market, their modern lineage is forgotten. To enhance their "authenticity" and "antiquity", coal is burned in them to provide a natural black covering.

Truckloads of old copper vessels, arriving from the villages of Anatolia, are frequently and unceremoniously dumped beside one or another of the many restoration workshops in front of the Copper Bazaar. Once they have passed through the hands of the Istanbul coppersmiths, the well-worn, and often damaged, copper pieces, relieved of their protective tin covering, reappear as glittering items prized for decoration. One suspects that the supply of these objects will dry up before the museums of the world realize that they are worth collecting.

Near the Yeni Cami and the Galata Bridge, around the Egyptian or Spice Bazaar, there are special market places for food. Inflation and modernization have simplified Turkish cooking and reduced the variety of spices used in the kitchen, but many specialties and curiosities are still available. The spice shops are particularly interesting. In addition to local and imported spices, they carry a great variety of *hennas* from Iran, Pakistan, and India, and deal in various resins and gums. Many kinds of glue and varnish for furniture finishing are still made for craftsmen. Frankincense called *günlük* is stocked for Armenian and Greek Christians, and in Istanbul itself is even purchased by Muslims, although *buhur* is the common incense in Anatolia.

It is difficult at first to conceive how everything is distributed and sold in the crowded Covered Bazaar, and how so many vendors can make a living. Once one is familiar with the place, however, one realizes that there is considerable organization in the apparent confusion of its streets. In fact, everything is quite precisely ordered, everyone has his own place, his regular territory and customers, and everyone earns a livelihood, if sometimes a sketchy one.

In a short article it is impossible to comment on more than a few aspects of the life and the importance of the Istanbul Bazaar. One thing is certain: a great deal of information can, and it seems to us should, now be gathered about the surviving traditions of this and other old Turkish market places — their dealers, their customers, the variety of goods offered for sale and manufactured — for the bazaars are keystones to traditional Turkish society. The kind of commerce and life that still exists in this city within a city will very likely soon disappear entirely. Tomorrow's visitors to Istanbul may well tour the *Kapalı Çarşı* merely as a historical monument, just as today we visit the Hagia Sophia as a museum, and not as the seat of the Patriarch of Constantinople and of the Byzantine Church.



Veronika Gervers is Associate Curator of Textiles and has been with the ROM since 1968. Michael Gervers is Assistant Professor of Medieval History and Art History at Scarborough College in the University of Toronto. Interested in the traditional life and crafts of the Middle East, the Gervers have travelled extensively in Turkey. As one of their joint research projects, they have started to work on a survey of the Istanbul Bazaar, its trade patterns and general organization. This article is a summary of their first investigations and impressions.

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